FEB 17 1925

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

Vol. LXXX. No. 7 NEW YORK AND CHICAGO, FEBRUARY 12, 1925 { Per Annum, $4.00 / Per Copy, 10 Cents

SKONVIK

SKÖNVIK SAB SWEDEN

STRONG MITSCHERLICH UNBLEACHED SULPHITE

AGENTS IN U. S. A.

Johaneson, Wales & Sparre, Inc.

250 PARK AVENUE (Cor. 46th Street) NEW YORK

TELEPHONE: VANDERBILT 1396 CABLE ADDRESS: GOODPULP

Entered as Second-Class Matter June 28, 1879, at the New York Post Office, Under Act of Congress, March 3, 1879. — FIFTY-THIRD YEAR — ESTABLISHED 1872 — Published Every Thursday by the Lockwood Trade Journal Co., 10 E. 39th Street, New York, N. Y.

The Coe Automatic Roller Dryer for Boards

The Minnesota and Ontario Paper Company have been manufacturing Insulite for several years. Insulite is a hard firm board of great structural strength and high insulating qualities made from pure wood pulp fibres. Its merit as a substitute for wood sheathing, also as a stucco and plaster base, and for insulation in building construction has been generally recognized by architects and engineers.

After careful investigation extending over several months, this company decided to use the Coe Automatic Roller Dryer for their new Insulite plant and have placed an order for the largest multiple deck roller dryer ever built, which is now under construction.

Other Coe Roller Dryers are in use by such large producers as the Celotex Company, the Beaver Products Company, the United States Gypsum Company and others. If you have a board drying problem to solve, it will pay you to consult with us.

We have experienced engineers, and an experimental dryer at our plant for making tests on special products, which are made free of charge if not too extensive. If the tests are satisfactory to us and to you, we will then submit estimates with guarantee as to capacity and efficiency, without obligation on your part.

Ask for Board Dryer Bulletin No. P-104.

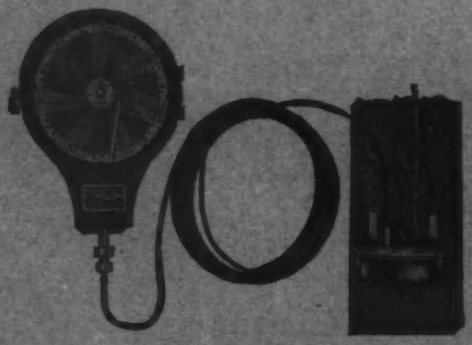
THE COE MANUFACTURING COMPANY

Painesville, Ohio, U. S. A.

Chicago Office
549 WEST WASHINGTON BLVD.
CHICAGO, ILLINOIS

New York Office
250 FISK BLDG., WEST 57th STREET
NEW YORK CITY

For Holding Liquids at Constant Level
and for taking stock of liquids on hand



No more accurate or simpler means can be provided than the installation of

BRISTOL'S
Recording Liquid Level Gauges

They will automatically record the height of liquid carried in

1. Fuel Oil and Lubricating Oil Tanks
2. Chemical Storage Tanks for Acids, Alkalies, Industrial Chemicals, Organic Chemicals, Wood Distillates, Intermediates
3. Stills
4. Evaporators
5. Reservoirs

Also applicable to measure and record head of water and other liquids flowing over wires.

The records are always dependable. Air is the transmitting medium between the flexible bulb; which is depressed by the head of liquid, and the recorder. Therefore there is no possibility of freezing.

Think what it would mean to know the true height of liquids carried in any or all tanks, for every day in the year. Ample warning is on hand when stocks begin to run low, which may result in arresting a costly delay or partial shutdown.

Ask us to send you Bulletin 1007-BE

THE BRISTOL COMPANY
Waterbury, Conn.

Branch Offices:

Boston, New York, Philadelphia, Pittsburgh
Detroit, Chicago, St. Louis, San Francisco

NATIONAL
Chrysoidine YP

It will produce your standard shade most economically

The excellent shade and tinctorial strength of National Chrysoidine YP make it the logical selection for the production of the standard browns of boxboard.

Let us demonstrate its qualities, as a self shade or in combination, on your stock.

NATIONAL ANILINE & CHEMICAL CO., Inc.

40 Rector Street, New York, N. Y.

Boston
Providence
Hartford

Philadelphia
Charlotte
Chicago

San Francisco
Toronto
Montreal

NATIONAL DYES

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALME' PRESIDENT — GEO. S. MACDONALD VICE-PRESIDENT & TREAS — F. K. HOPPIE SECRETARY

10 EAST 39TH ST. N.Y. U. S. A

TABLE OF CONTENTS

Copyright, 1925, by Lockwood Trade Journal Co., Inc.

December Paper Production Showed Gain 29
Lambertville Mill Sold 29
Pulp Importers Have Election 29
Forest Extinction Danger Exaggerated 30
Lumbermen Adopt Embargo Resolution 30
Frasers Get Stetson, Cutler Co. 30
Board Superintendents to Meet 30
To Build News Print Machines 30
Trade in Philadelphia Quiet 31
Mills Manufacturing With Caution 31
Philadelphia Houses Move 31
Scott Paper Co. Buys Site 31
Chicago Paper Demand Satisfactory 32
Pilcher-Hamilton Sales Luncheon 32
Seaman Paper Co. Grows 32
Kalamazoo Trade Notes 32
Business Good in Toronto 34
Buy Pulpwood from Settlers 34
Canada Waxed Papers Busy 34
Canadian Paper Box Convention 34
New York Trade Jottings 36
Boston Trade Picking Up 36
Recent Incorporations 38
News of The Baltimore Trade 38
OBITUARY 40
Los Angeles Trade News 40
Carton Council Meeting 40
Vortex Co. Absorbs F. N. Burt 40
Simplex Corp. Increases Stock 40
EDITORIAL 42
"Liberty" Publishers Answer Critics 43
New President for Thacker-Craig Co. 43
World Paper Production Survey 43
TECHNICAL SECTION 45
COST SECTION 55
Imports and Exports of Paper Stock 60
MARKET QUOTATIONS 64
MARKET REVIEW 66
MISCELLANEOUS MARKETS 68
Endura Co. Has Fire 66
Kinleith Mills to Move Office 66
Tulip Cup Stock Offered 68

Want and For Sale Advertisements, Pages 70, 71 & 72

H. G. CRAIG & CO.

52 VANDERBILT AVE., NEW YORK, N. Y.

Paper Merchants

HG&CO

Established 1868

NEWS
HANGING
BOX BOARD

TISSUES
SPECIALTIES
WOOD PULP
PAPER MILL SUPPLIES

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXX. No. 7 NEW YORK AND CHICAGO Thursday, February 12, 1925

PAPER PRODUCTION FOR DECEMBER SHOWS GAIN

According to Reports Furnished the American Paper & Pulp Association and Affiliated Associations Production for the Last Month of the Year Showed an Increase of 2 Per Cent as Compared with the Previous Month, Following a Decrease of 10 Per Cent for November—Wood Pulp Production Showed an Increase of 1 Per Cent Distributed Over All But Three Grades.

The December production of paper in the United States, as reported by identical mills to the American Paper and Pulp Association and cooperating organizations, showed an increase of 2 per cent over November's production following a 10 per cent decrease in November as compared with October, according to the Association's Monthly Statistical Summary of Pulp and Paper Industry. All grades showed an increase in production, as compared with November, except paperboard and tissue.

The Summary is prepared by the American Paper and Pulp Association, and the central organization of the paper industry, in cooperation with the Binders Board Manufacturers Association, Converting Paper Mills Association, Cover Paper Association, Wraping Paper Manufacturers Service Bureau, and Writing Paper Manufacturers Association.

The figures for December for same mills as reported in November are:

Grade	No. of Mills	Production, Net Tons	Shipments, Net Tons	Stocks on End of Month, Net Tons
News print	65	120,262	121,357	23,838
Book	63	86,801	85,403	39,398
Paperboard	107	111,137	107,375	42,284
Wrapping	86	50,222	47,791	64,760
Bag	26	9,108	9,302	6,223
Fine	82	24,454	23,883	41,714
Tissue	45	11,526	10,513	11,091
Hanging	8	4,887	5,140	2,222
Felts	21	19,772	20,149	3,304
Other grades	64	20,468	20,753	14,682
Total—all grades	..	458,637	451,666	249,516

During the same period, domestic wood pulp production increased 1 per cent, this increase being distributed over all grades except sulphite bleached, sulphite mitscherlich and soda pulp. The December totals, mills identical with those reporting in November, as reported by the American Paper and Pulp Association, through the United States Pulp Producers Assn., are as follows:—

Grade	Number of Mills	Production, Net Tons	Used, Net Tons	Shipments, Net Tons	Stocks on Hand End of Month, Net Tons
Ground wood pulp	101	80,252	79,028	4,114	116,653
Sulphite, news grade	38	37,775	34,482	2,960	11,960
Sulphite, bleached	20	20,625	15,133	4,745	4,098
Sulphite, easy bleaching	5	4,997	4,179	442	2,153
Sulphite, Mitscherlich	6	4,864	4,548	340	648
Sulphate, pulp	12	14,961	13,026	1,536	5,384
Soda pulp	12	15,252	11,766	3,924	2,759
Other than wood pulp	2	19	57	.....	19
Total—all grades	..	178,745	162,219	18,061	143,674

Lambertville Mill Sold by Sheriff

LAMBERTVILLE, N. J., February 10, 1925.—Another chapter was written in the varied history of the old Perseverance paper mill, located along the canal feeder just south of Bridge street, when it was sold by the sheriff to the former owners, the Lambertville Paper Company. This was one of the early paper mills of this section and some time ago was acquired and operated by the Lambertville Paper Company. In spite of its long recognized name of Perseverance, it got into difficulties and was disposed of to the new Jespersen Newsprint Corporation, to be used as Mill No. 1 in the reclamation of newsprint paper by a new process that seemed destined to revolutionize the business. After the installing of a quantity of new machinery and experiments with wood pulp and old paper the concern had just got to the point of production when in 1922 a disastrous fire swept away everything except the walls and a small part of the mill.

In spite of this occurrence the owners persisted and rebuilt the place with the evident intention of continuing the manufacture of paper. With the machinery set and the property in readiness, however, the finances seemed to be at a stopping point.

Election of Wood Pulp Importers

The Association of American Wood Pulp Importers held its annual meeting at the Uptown Club on Friday when the following officers and committees were elected for the ensuing year:

President, A. J. Pagel; vice-president, J. F. Patton, secretary, O. A. Wales; treasurer, O. Hylin; director, W. H. Anders; national councilor, H. E. Atterbury, substitute national councillor, J. A. Millar.

Committee on Admissions—H. Lagerloef, chairman; N. R. Johaneson and S. Willey.

Nominating Committee—J. A. Millar, chairman; F. Enders and J. T. Lea.

The above officers and committees will hold office until the next annual meeting, which will be held the first Thursday in February, 1926.

Pulp Mill Legislation

QUEBEC, Que., February 10, 1925.—Legislation incorporating one of the largest paper companies in the province was put through the committee stage of the Legislative Assembly today. The company is the Anglo-Canadian Pulp and Paper Mills, Ltd., and represents the Rothmere interests. The promoter is W. F. Clarke of Clarke Brothers, which firm already has large paper mills. The measure put through today confirms the title of the company to the forest areas of the basin of the Manicouagan River in the County of Saguenay.

The mills will be established a few miles from Quebec. Under the contract leasing the forest areas, the mills must have a daily capacity of 100 tons of paper and 100 tons of pulp, and within seven years the production of paper must be increased to 200 tons a day. All the wood cut from the concession must be manufactured at the mill here. The forests cover an area of 2,235 square miles. The price paid was $400 a square mile.

EXPLODES MYTH OF FOREST EXTINCTION IN QUEBEC

Hon. Honore Mercier in Vigorous Speech in Provincial Legislature Expresses Opinion That Many Statements Have Been Based on Miscalculation—Canadian Lumbermen's Association Adopts Resolution Expressing Hope That Proposed Embargo on Export of Pulpwood Will Be Given Further Serious Consideration Before It Is Actually Imposed—Fraser Gets Stetson, Cutler Control.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., February 9, 1925.—Hon. Honore Mercier, Minister of Lands and Forests, exploded the myth of forest extinction in the Province of Quebec this week in a vigorous speech in the Provincial Legislature. The principal argument of those who had been demanding either a pulpwood embargo or a substantial export tax on pulpwood is that the forests of Eastern Canada are on the point of extinction and that within a decade there will be a timber famine in this country.

"Some people," said Mr. Mercier, "claim that the supply of wood will disappear in 10 years. Others make it 15; others 20, while still others, and, these men of judgment, put the time at 100 years, or claim that the supply of wood will remain in perpetuity. It is apparent that those who express opinions do not have all the same information. No doubt if the forests were to be burnt down this year, there would be no wood next year, but the Quebec Government claims that with its policy of restriction of the cut, with its policy of checking fires and through the aid of a good staff of efficient forest engineers, it can be claimed that our descendants for many generations will have sufficient wood in this Province. This does not mean that there will be any let-up in the rigor of the law to check fires nor in the regulations as to cut. Forest fires are more dangerous to the perpetuation of the forests than the annual cut. As an instance, I may mention that there is a forest area on the St. Maurice River which has been exploited for the past 60 years with great care and it is as good today as it was 60 years ago. That is the kind of policy which is needed in all parts of the Province."

The Department, added Mr. Mercier, now has the machinery necessary to care for the forests, and work for forest conservation, so that the exploitation would be rational and provide for perpetuation for all time. Mr. Mercier did not think much of those who undertook to say how many cords of pulpwood there were standing in the provinces. These so-called experts got their figures by looking at maps of the Province, and estimating the number of trees and the number of cords of wood such trees would furnish. The figures given by these so-called experts could not be relied upon.

Lumbermen and the Embargo

That the proposed embargo on the export of pulpwood be not imposed until after the most careful consideration of its effects upon the rights of all those interested and upon Canadian interests in general, was the text of a resolution adopted by the Canadian Lumbermen's Association at their annual convention in Quebec on Thursday last. Other clauses in the resolution deprecated the imposition of an embargo without due consideration to existing property rights, and characterized the proposal as an economically unsound method of conserving the timber resources of the country.

Hon. Mr. Mercier was the principal speaker at the annual banquet of the association. He referred to the credit which was due Canadian lumbermen for the development of the water power wealth of the Province, and expressed the hope that they would continue their interest in this development. He assured them that the Quebec Provincial Government, appreciating the importance of the lumber industry, would do all in its power to assist by wise legislation its continual growth.

Fraser Gets Control of Stetson, Cutler Co.

It is announced that Fraser Companies, large pulp and lumber manufacturers of Edmundson, N. B., have purchased control of Stetson, Cutler & Co., Limited, who for many years have operated a valuable and extensive lumber business in the provinces of Quebec and New Brunswick. Through this transaction, Fraser Companies acquire control of approximately 2,100 square miles of leasehold timber lands in the Provinces of Quebec and New Brunswick, and about 50,000 acres of freehold timber lands in New Brunswick. It also obtained control of the operation of several large sawmills located for the most part in the vicinity of Campbellton and St. John, N. B., which have an annual manufacturing capacity of approximately 60,000,000 feet b.m. of lumber. It is understood that no change in the corporate identity of Stetson, Cutler & Co., Limited, is contemplated, and it is believed that the operation of the company, as heretofore, will be continued under the name of Stetson, Cutler & Co., Ltd. At a directors' meeting of Stetson, Cutler & Co., held last week, Archibald Fraser was elected president and general manager of the company, and Donald Fraser, W. Matheson, W. F. Napier and W. C. Pitfield were elected directors.

News Print for South America

A new market is opening up for the news print mills of Canada in South America, chiefly in the Argentine and Uruguay. It is learned that companies such as Laurentide, Price Bros. and Brompton, operated through the sales agency of the Canadian Export Paper Company, are now shipping substantial quantities to these two countries. Up until recently Germany held that market, but various causes, including increased freight rates, have interfered and these countries are now turning to the Canadian mills. During the war, when Germany exports were cut off, there were shipments made for some time by Canadian mills to the South, but when conditions became normal in Germany these ceased. It is expected that a permanent market will be maintained for Canadian news print mills in South America.

Board Superintendents to Meet

Arrangements are being made by a committee, of which Henry Bert of The Monroe Paper Products Company of Monroe, Mich., is chairman, for a meeting of the Western Board Division of the American Pulp and Paper Mill Superintendents Association, to be held at The Park Hotel, Monroe, Mich., on Friday and Saturday, February 20 and 21.

The first day of the meeting will be devoted to visiting the different mills in the city, followed by a dinner in the evening and a program of speeches and papers which are being prepared by men who will have something worth while to say.

Full details will be published in the later and fomral notices to be mailed to the members in this division, as well as those interested in Board making in other nearby states.

Fred Boyce and Peter J. Massey have been invited to be present at this meeting, and other members of the National Association will be invited.

Saturday morning will be devoted to a short business session, at which officers will be elected for the ensuing year, and plans made for the National Convention which will be held at Niagara Falls, N. Y., on June 4, 5 and 6.

Secures Order for Paper Machines

MONTREAL, Que., February 12, 1925.—The Dominion Engineering Company, of Montreal, has secured the contract for building two 166-inch news print machines for the addition to the International Paper Company's plant at Three Rivers, Que. The machines will increase the Company's output by from 150 to 180 tons per day.

PAPER CONVENTION QUIETS BUSINESS IN PHILADELPHIA

Attendance of Executives at New York Gathering Had Tendency to Produce Temporary Trade Lull—Federal Reserve Bank Finds That Mills Are Manufacturing with Caution—Three Local Paper Houses Charge Their Locations—Norbert A. Considine Leaves for Visit to European Mills—Scott Paper Co. Buys Site at Front and Market Streets—Endura Co. Has Fire.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., February 9, 1925.—With the attraction of the local distributors to the more important details of the paper world listed in the program of the National Convention held in New York during the week and the attendance of Philadelphia representatives at the Metropolitan gathering, the Quaker City trade was left to drift along without either material business advances or the guidance of executives and heads of firms. Those from the local trade who journeyed to the New York assembly returned to their desks fully confident that the future of the industry was brighter than it has been in many months and that the helpfulness and assurance which they have gleaned through the national meeting has given a renewed spirit for the forward outlook of the business world as it pertains to paper distribution. The general paper markets of the past week were quieter than since the new year began. In both the fine and coarse divisions there was experienced a resting spell from the more active demand of the previous fortnight.

Papers Firmer

Though the business trend was towards a resting period there were no price recessions and the market appeared to be on a firmer basis than at this time last year. Paper dealers are looking forward to a steady upward progress in preparation for the Spring business revival. In its report of stocks now in the warehouses of the local jobbers, the Federal Reserve Bank, for the Third, or Philadelphia, District, estimates that there are larger quantities of all grades of papers on hand at this time than last year and quotes the percentage of increase as 15 per cent over those of 1924. If this estimate is taken as a basis upon which to predict the future of the price trend the dealers believe that there will be no rapid advance in quotations for this month.

Mills Manufacturing with Caution

Local mills, while now operating to within 90 per cent of capacity, as reported by the Federal Reserve Bank, are producing only salable stocks and those for which they have actual orders. They are taking no chances with loading their warerooms for future stocks which they may be forced to sell at a sacrifice and are confining operations to those grades that are actually in demand.

Those mills in the Philadelphia district, devoted to the production of chip and news, have within recent days advanced the price from the closing quotations of 1924 of $45 to the present market value of $52.50, an increase of $7.50. Corrugated rolls are up 25 cents per roll. Tissues are holding firmer with a stronger demand noted in the last week. While standard Krafts were more steady in price there still are some offerings of special lots from 3 cents upward in a well supplied Kraft market.

Paper Houses Change Locations

The past week brought about the removal of three paper distribution concerns to larger homes.

Having acquired the larger single floor accommodations for the purpose of consolidation of all departments for greater business convenience, the Raymond & McNutt Company this week will have completely established its fine paper distribution headquarters in the Sheridan Building, Ninth and Sansom streets. The company has secured the second floor of the building, with its several hundred square feet of space, for its future home. The new quarters are just around the corner from the old location at 825 Walnut street, where the firm began business more than six years ago. The firm will continue to develop its business of dealers in high grade printers, engravers and stationers papers, featuring books, covers, announcement stocks and writings.

Dee Paper Co. to Remove

Having again secured the lease to the old location, which was partially destroyed by fire three months ago, the Dee Paper Company will return to the building at 227 Church street, where a little over five years ago the firm founded its business. The building, which has been remodeled and modernized since the fire, will be entirely devoted to the Dee paper business, with five stories at the disposal of the company. Since the fire in early October, the Dee Company has been occupying the building at 217 Church street, just a few doors away as temporary quarters. Removal to the old home will be made this week.

Anderson Paper Co. in New Home

In order to provide for the handling of the rapidly growing demands of its customers, the Anderson Paper Company, 430 Race street, was obliged to seek larger quarters for its executive offices and warehousing purposes. During the week the company removed to the more commodius building at 125 North Fourth street, in which was installed the complete stocks and offices of the company —Philadelphia's only wholesale distributor and jobber of cardboards, bristols, blanks and similar stocks exclusively. The executive offices and sales department are to be housed on the main floor where also are provided modern shipping facilities. The sales department will be under the supervision of Edward O. Vaughn. He formerly was associated with the old firms of I. N. Megargee Paper Company, Megargee & Hare, and with the present day D. L. Ward Company and the Whiting-Patterson Company. He will be assisted by P. B. Sibson, for many years connected with the Molten Paper Company. A. Hartung, Inc., and the Garrett-Buchanan Company. The Anderson Paper Company, of which A. H. Anderson and Harry Edelson are proprietors, has during its brief business history been obliged to make two changes to larger quarters in order to keep pace with its growth. It was organized a little over a year ago by Mr. Anderson, who started out with offices in the Drexel Building and removing to his present location about a year ago when Mr. Edelson joined the firm.

Norbert A. Considine Off to Europe

Having returned from Havana, where he supervised the reopening of the Cuban offices of the J. L. N. Smythe Company, which during the week were consolidated with the paper house of Pennsylvania Exporting Department under the title of the newly organized firm of Considine & Co., for the purpose of conducting an export business to be scattered over South America, Mexico, Central America and the West Indies, Norbert A. Considine, president of the Paper House of Pennsylvania, left on Thursday for European paper mills. He was accompanied to New York by his brother and business associate, Raymond J. Considine, who went to the Metropolis to bid his brother "bon voyage." President Considine will visit the mills in Germany and the Scandinavian Peninsula While in Cuba he placed the management of the Havana office under C. T. Guerrero.

Scott Paper Co. Buys Site

Anticipating a $10,000,000 annual volume of business within the next five years, the Scott Paper Company, of Chester, Pa., announces the purchase of additional property near its present large holdings of mills and land. The new purchase is located at the southeast corner of Front and Market streets, and is the second step taken in a project of expansion launched a week ago, when the order for

(*Continued on page* 66)

CHICAGO PAPER DEMAND IS FAIRLY SATISFACTORY

Reports From All Quarters of the Market Shows That Volume of Business for January Compares Very Favorably with Sales of January a Year Ago—Improvement Said to Be Especially Noticeable in the Coarse Paper Division—No Lower Prices Can Be Expected and Way Seems Paved for Some Upward Revision—Pilcher-Hamilton Salesmen Club Hold Enjoyable Luncheon at Union League.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, February 9, 1925.—The January volume of business is reported as satisfactory from all quarters of the paper market. In the fine division dealers report sales for the month, as compared with the same period a year ago, as very satisfactory without giving out any actual data. In the coarse division the dealers have in some instances been a trifle less reserved and have indicated sales increases of from ten to twenty-five per cent. Some further revision downward was made in the common and mixed in old papers. Dealers, however, report that the close of the week finds the situation somewhat firmer and feel safe in predicting that there will be a horizontal increase in values, if not yet this month, shortly after the first of next. Gossip filtering back home from dealer representatives, who were in New York last week during the convention, has it that in the coarse division no lower prices can be expected, and some, reading between the lines, seem to see the way being paved for some revision upward.

Pilcher-Hamilton Sales Luncheons

The Pilcher-Hamilton Salesmen Club held its regular monthly luncheon at the Union League Club, Thursday, February 5. No one who has ever been invited to "sit in" with the boys declines a second invitation. Sales manager Edgar A. Hall Jr. can be depended upon to provide a feast of reason that outshines the efforts of the Union League Club chef, worthy of praise as they are. For this occasion he sprung a novelty by providing a talk from "the other side of the counter." F. C. Boggess, of the Pepsodent Company, and president of the Purchasing Agents Association of Chicago, told the group how to gain and hold the business and respect of the purchasing agent. G. E. Runcie, of The Champion Coated Paper Company, also made a very interesting talk.

"To succeed is simply to know," said Mr. Boggess at the start of his talk, "but to know is not so simple." He perhaps voiced no new thought when he said that it is absolutely essential for a salesman to have as thorough a knowledge of his merchandise as possible, but he gave the why of it from a purchasing agent's angle. He explained that the average purchasing agent must have an intimate knowledge of hundreds and often thousands of items and that he depends a great deal upon the salesman for that knowledge. If he is interested enough in the salesman's offering to ask questions, he expects facts. The salesman who bluffs or purposely makes misstatements about his goods is soon found out and has only himself to blame if the P. A. is always "out" when he calls. Where a salesman is new to his line, he should make an honest acknowledgment that he can not answer authoritatively a certain question but will obtain the exact information and see that the inquirer gets it.

The salesman should know when to talk and should also know when he is through. That is, he must realize that a purchasing agent has a world of detail to get out of the way and has no time to listen to chatter. Mr. Boggess qualified this somewhat by saying that there are times when a good story is not out of order, but the salesman must know his man. A good salesman should also know when the prospect is really not interested.

Buyers are human and succumb to the petty annoyances that bother other mortals and must not always be taken seriously if they rough up the salesman who happens along while the irritation is still making itself felt. An incident was mentioned to illustrate the point. The talker had occasion one time to call on the superintendent of a certain plant to learn his method of performing a particular operation. The man came back with the counter query—"how do you do it"—and when told, he said "you are darned fools—we do it thus and so." Boggess was a little nettled but covered it up and explained to the man why his plant used the method they did. Thereupon the superintendent said, "there is something in that for me to look into." His "darned fool" was mannerism and not criticism and if Boggess had taken him seriously and frozen up they would both have lost some good information.

Mr. Boggess stressed the fact that when a purchasing agent gives an order the merchandise is usually wanted for a definite purpose at a definite time and that it is up to him to keep a follow up on that order until it has become an accomplished fact. The salesman who knows what he can promise and does not promise anything else, and he and his house establishes a reputation for dependability, is going to always find the latch string out at the P. A.'s office.

Salesmen were urged to develop personality, call often, but not too often, be natural, have the right spirit and never know when to quit. Mr. Boggess concluded his talk with—"there is no success for the lazy man."

Seaman Paper Company Growing

The Seaman Paper Company, with mill sales offices at 410 North Michigan avenue, are growing like the proverbial weed. Last spring they were compelled to increase their main office space fifty per cent to take care of their increasing volume. Now the expansion is in their warehouse stock department. An entire new unit combining all the good features of the old plus many that are new has been added. With the idea of improving merchandise and merchandising methods, their stock department will be operated in its entirety, management, sales, deliveries, invoicing, etc., from the new office for that department at 423 West Ontario St.

News of the Trade

J. B. Jones, of the Western Newspaper Union, Omaha, hobnobbed with Chicago friends between trains last week. Mr. Jones was on his way to Charlotte, N. C.

Edgar A. Hall, Jr., the straight line eight sales manager for The Pilcher-Hamilton Co., 340 N. Dearborn St., was in New York last week during the convention. From New York he went to Berlin, N. H. and Portland, Me., visiting mills at both places.

Kalamazoo Trade Notes

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., February 9, 1925.—L. W. Sutherland, president of the Sutherland Paper Company, has been in Kansas City and St. Louis on business.

George E. Bolender, traffic manager of the Western Paper Makers Chemical Company, attended the central traffic territory rate case hearing in Washington last week.

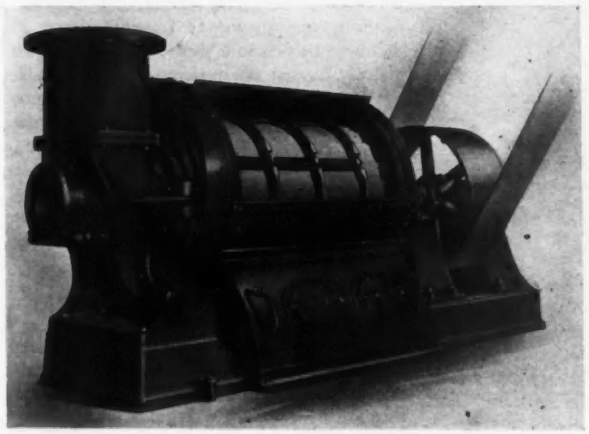
F. M. Hodge, president of the Kalamazoo Paper Company, accompanied by Mrs. Hodge, sailed on the *Samaria* for a ten weeks' tour of the Mediterranean countries and continental Europe.

George L. Irvine, president of the Saniwax Paper Company, and Mrs. Irvine are in Europe. They sailed on the *Scythia* and expect to return to Kalamzoo about May 1.

Edward C. Rutz, head of the electrical power division of the Bryant Paper Company, addressed the Kalamazoo Buyers Club, a branch of the Southwestern Michigan Purchasmg Agents Association, on "Steam Economy."

Richard W. Milham has been elected president of the Foremen's Club of the Bryant Paper Company. The other officers are: Vice president, Christian Schrier; secretary, Harry Haines. Dinner preceded the election, also talks by Felix Pagenstecher, president of the company; Peter C. Servaas, assistant, and Edward C. Rutz, chief of the power department.

The BIRD PULP SCREEN



What it Does!

Produces cleaner, stronger stock than your present screens.

Produces more stock per day than your present screens.

Consumes far less power per ton of stock than any screen you have ever used.

Increases the earning power of your equipment to such an extent that it is an immediate economic necessity for your mill.

The Bird Pulp Screen is as superior for screening pulp as the famous Bird Screen has proved for screening paper stock.

How it Works

THE BIRD PULP SCREEN screens the stock in suspension, evenly, quietly, efficiently. Wih 50 to 100 per cent less screen area, its capacity is 50 to 100 per cent greater than other screens.

All of the long, useful fibres are drawn through the plates, but none of the impurities.

The screened stock is automatically elevated by the action of the screen so that pumping is eliminated. This saves about half the power ordinarily required and greatly reduces maintenance expense.

The capacity of the screen can be varied simply by changing the speed, so that maximum economy of operation may be obtained under a wide variety of conditions.

Extreme simplicity of construction is an important feature of the screen. The drum is the only revolving part and there are only two bearings, both on the outside. Maintenance is negligible. The small size of the screen, in addition to its large capacity, effects a considerable saving in floor space.

BIRD MACHINE COMPANY
South Walpole Massachusetts

BIRD MACHINERY

7718

FEBRUARY BRINGING GOOD BUSINESS TO TORONTO TRADE

Indications at Present Are That Month's Orders Will Surpass January's—Readjustment of Prices on Bonds and Ledgers Goes Into Effect—Beaver Products Co. Buying Pulp Wood From Settlers—Canada Waxed Papers, Ltd., Passing Through Busy Period—Shipman Paper Box Co. Making Progress—Porcupine Pulp and Lumber Co. Acquires Additional Timber Limits.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, February 9, 1925.—The paper trade is off to a good start in February and, judging by the amount of orders which have been coming in, the record of January should be surpassed. All lines show considerable improvement and it is anticipated the business will keep up for the remainder of the month. As time passes the trade both in the manufacturing and the distributing end grows more confident and hopes that 1925 will be a nearly normal year. The publishing business has been hard hit during the past five years in Ontario and this has somewhat reduced the quantity of paper consumed. Over one hundred weeklies have within that time ceased publication and some eight or ten daily newspapers have gone out of business or been amalgamated. The cost of a printing plant is double what it was ten years ago while the cost to the subscriber of a paper has also advanced. Most of the weeklies in the province now sell at two dollars a year and, even at this figure, the circulation returns are less profitable than they were ten years ago when a dollar per annum was the ruling rate. There are no indications that the cost of manufacturing, printing or distributing paper will decrease.

Readjustment in Prices

Some slight readjustments of prices of bonds and ledgers went into effect last week. No. 1 paper, including superfine linen record and fancy papers made from rag stock, were advanced 6 per cent. No. 1 bonds and ledgers in ream lots are now selling at $61.25 per 100 pounds long list, while No. 2 bonds and ledgers in ream lots are now being quoted at $46.25 per 100 pounds. These increases were deemed necessary by the high price of rag stock. To meet conditions that have arisen in that market No. 6 grade, white has been reduced half a cent a pound by the jobbers and colors have been reduced one and a half cents a pound. The present price on white is $18.75 per 100 pounds long list and colors $19.38 per 100 pounds.

Lectures Are Well Attended

The course of lectures covering the technology of pulp and paper manufacture, which are being given weekly at Toronto University by T. Linsey Crossley, chairman of the committee on education of the Canadian Pulp and Paper Association, are being well attended, not only by students in the faculties of applied science and forestry but by others interested. The lectures are delivered by Mr. Crossley in cooperation with J. Watson Bain of the chemical engineering department.

The Possibilities of Research

Regarding an address before the Engineering Institute of Canada in Toronto, W. Kynoch, superintendent of the Forest Products Laboratories of Canada, Montreal, says that his remark in reference to the possibilities of obtaining food materials from wood was merely an observation in passing as to this being within the bounds of possibility, as a result of research. He adds that he did not state, or in any sense imply, more than that and is not at present prepared to do so.

Purchasing Wood Direct from Settlers

The Beaver Products Company, of Buffalo, who have a busy plant at Thorold, for manufacturing wall and roofing materials, state that they are making all their purchases of pulpwood this season from settlers along the Transcontinental railway in Northern Ontario. The company formerly had two rossing mills at Frederickhouse and Charlton, both of which were destroyed by fire some time ago.

Canada Waxed Papers Is Busy

The new industry, which was started some months ago by Canada Waxed Papers, Limited, Toronto, of which J. MacArthur is President and George Courtenay, Vice President, is busy at the present time. The company recently moved from 61 Yonge street to 405 Logan avenue where they have a well equipped plant with the most modern machinery, located on a siding of the Canadian National Railway. Both Mr. MacArthur, who was for many years connected with the British-American Wax Paper Company, Toronto, and Mr. Courtenay, who had much insight into the business in Ireland, are admirably qualified for the production of the several grades of waxed paper now in use in Canada.

The company turn out waxed, parchment and other lines for automatic wrapping machines.

Paper Box Company Makes Progress

Although only a little over six months in existence, the Shipman Paper Box Company, which some months ago was taken over by the Consolidated Paper Company, has made splendid progress. Gerald T. Shipman is the president and general manager and William R. Snowden, formerly of Detroit, is the superintendent. A folding box department was lately installed and a general line of set-up shoe, candy and hosiery boxes is also turned out. The capacity of the plant has been doubled and larger quarters may have to be secured in the not distant future. The officers of the Consolidated Paper Company are Gerald T. Shipman, President; William R. Snowden, secretary-treasurer and Thomas H. Higgins, of Detroit, who is a director. Mr. Snowden is also interested in London Shipping Containers, Limited.

Canadian Paper Box Convention

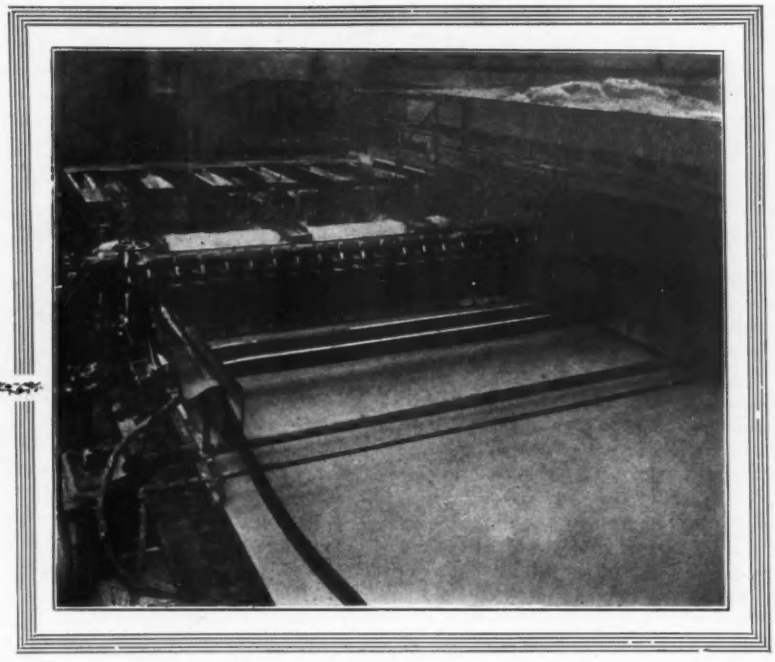
One of the Maritime province cities may be the scene of the convention of the Canadian Paper Box Manufacturers' Association in 1926. Two or three years ago the gathering was held in the east of St. Andrew's, N. B., and the Maritime provinces want the meeting another time. C. Winter Brown, President of the D. F. Brown Paper Box Company, St. John, N. B., is a former President of the Canadian Paper Box Manufacturers' Association and for many years has been one of the active figures in the organization.

Canal Boats for Carrying Pulp Wood

Recently an inquiry was received in Toronto from a Newfoundland pulp organization asking for particulars of barges carrying pulp wood and intimating that they were now being used, and could be submerged by flooding to enable the wood to float out. The Ontario Paper Company, of Thorold, Ont., brings up large quantities of pulp wood from lower Quebec in steel barges with single hold and large hatches, from which the wood is removed with a crane or derrick. In answer to an inquiry regarding submerging by floating wood to unload, Warren Curtis, Jr., manager of the Ontario Paper Company states that he does not know of any boat of this kind in existence. He adds that a ship designer in New York was figuring on a barge of this type for some time but so far as he knows the inventor has not yet any under construction.

Contracting to Feed Camps

One of the largest boarding and commissary caterers in Canada is the Crawley & McCracken Company, who during the past year had 161 camps in operation in the pulp wood and lumbering line. This firm is now operating a group of camps for J. McFadden, Limited, Spragge, some of the camps being nearly 40 miles from the nearest railroad. Transportation on a job like this is a problem and motor trucks are used for about half the distance and sleighs or wagons for the remainder. There are not as many pulp wood camps in operation this season as last owing to the dullness in the wood market.



NEWS PRINT—How *and* Why *to* Make It Better

Most news print can be improved in quality to very good advantage. Rolls made with frequent breaks mean trouble on the press. Unless the paper is strong the pull of the press means many breaks. Even caliper means clearer and better printing. Absence of lumps means no damaged plates.

All of these improvements are being made by a well-known news print manufacturer without increase in cost. In fact, production has been increased, and costs have been lowered —a better paper at a lower price. The results are achieved by the new Voith High Pressure Stock Inlet. A letter will bring you full particulars regarding this and similar cases and a description of the machine itself. Write that letter today.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

New York Trade Jottings

C. W. Halligan, cost accountant of the News Print Service Bureau, is on a trip through the Lake states.

* * *

G. A. Ware, assistant secretary of the News Print Service Bureau has been on a service trip to New Brunswick, Me., this week.

* * *

L. J. Parent, General Manager of St. Croix Paper Co., Woodland, Me., with Mrs. Parent sails on February 7 by the *S. S. Bergenaria* for an extended trip abroad.

* * *

David L. Cohen, founder of the Manhattan Paper Company, announces that he is no longer connected with that business but is now established under the firm name of the Hope Paper Company at 43 Greene street. The temporary 'phone number is Canal 3813.

* * *

J. Howard Stannard is announcing to the trade his resignation as President and General Manager of the Grand Lake Company, Inc., and the opening of offices at 280 Madison avenue by the Stannard Paper Company, paper mill representatives.

* * *

The Bertin Manufacturing Corporation, has incorporated in New York to handle paper products, with capital stock placed at $20,000. The incorporators are O. Hertzwig, H. Schwartz and R. G. Zsewo. Attorney for the new corporation is J. S. Koenigsberg, 16 Whitehall street, New York.

* * *

R. S. Kellogg left today for Toronto and Ottawa. At the former place he is to speak tomorrow on Forestry before the executives of the Canadian Railway Association. On Saturday he will be in Ottawa where he is to be a guest at a luncheon given by his excellency, Governor-General and Lady Byng of Vimy.

* * *

The weekly luncheon of the Salesmen's Association held on Monday at the Hotel Belmont, had an unusually large attendance, the members making a special effort to be present to do honor to the newly elected vice-president, R. C. Tilden. The welcome he was given was an especially cordial one. The association is now planning a special program for its meetings in the near future. Three new applications for membership have been received since the convention and there are more in sight. The members all expressed themselves with enthusiasm on the success of the association's activities during convention week and especially regarding the banquet which proved an educational as well as social treat.

Boston Trade More Encouraging

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., February 8, 1925.—A fairly healthy condition of business in and about Boston is reflecting itself in the paper trade in this section, a survey shows. The brightest spot appears to be among merchants handling the fine grades and dealing with printers, stationers and the big retail stores. The box board men, however, are not so optimistic, although indications are beginning to appear that give them some hope. With the general good business that is being reported in other lines, other than the paper trade, the box board men see a break ahead that will mean fairly good returns some time in April or May. They are still talking about the "lean year" of 1924 and add "January was nothing to mention."

Fine paper movements are very active, according to several of the bigger and older firms. The call for coated and envelope stock is on the increase and some of the houses are actually pressed to keep up with the demands for paper from the printers, caused chiefly, it is said, by the ever-increasing direct-by-mail-advertising business. Printers demands for these products is unusually heavy, reports show. Very few changes are reported in prices in fine grades.

A "watchful waiting" policy exists in the box board trade. It is explained that the mills are running very close—some even shutting down. Hand-to-mouth buying is responsible, it is said, the customer preferring to wait for a break in price. The break fails to come, the stock becomes dangerously low, the order is rushed to the broker, rush delivery is asked for—and he gets it. Some of the stories being circulated among box board men concerning quick deliveries at the mill are causing not a few smiles. But these same men point out that such is not a healthy way of doing business.

It is pointed out that the price probably will remain at the present level for some time, although reports reached Boston this week of two big mills advancing one price $2.50 a ton which is taken as another good sign of business to come. So box board men, despite the apathetic conditions which now appear to exist, refuse to accept it as a condition that will last for any great length of time.

Negotiations Resumed in Sweden

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 11, 1925.—Negotiations between the operators and the workers in the Swedish paper industry have been resumed, says a cablegram to the Paper Division of the Department of Commerce from Trade Commissioner Klath at Stockholm. The cable states that the lockout which had been scheduled to go into effect February 1, was postponed until February 19, by which time it is hoped that an agreement in regard to wages will be reached.

K. U. P. Co. Erects Large Sign

What is believed to the the largest electric sign in Michigan has just been erected on the machine room building roof of the Kalamazoo Vegetable Parchment Company's No. 2 mill. It is the product of the American Sign Company of this city and is 175 feet long and 24 feet in width. It is a skeleton type sign, with a large circle in the center, bearing the monogram "K.V.P." In five foot letters running the length is the inscription "Parchment, Writing, Waxed Papers." It can easily be read from the western hills, a mile and a half away.

Plans of Harpers Ferry Paper Co.

A press dispatch from Charlestown, W. Va., says, "the stockholders of the Harpers Ferry Paper Co. which was recently burned out, are considering, it is said, turning the former plant into a box factory. The question will not be decided upon until probably the latter part of February or March 1. The electric light plant will be rebuilt, and the box factory, if built, will be in conjunction with it.

Box Board Men to Meet

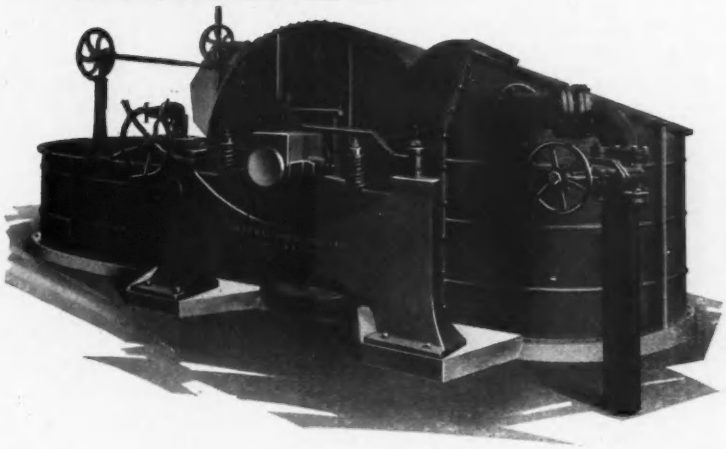
The next regular meeting of the Box Board Association is to be held in Chicago, on Thursday, February 19, Congress Hotel, at 10:30 A. M.

John H. Mañff, secretary of the association, announces that he conference called by Secretary Davis on January 15 was duly held, and by applying to the Commissioner of Labor Statistics, there will be soon available printed copies of what transpired.

Paper Plant Removes From Toronto

The British American Wax Paper Company, Wrigley building, Carlaw Avenue, Toronto, has removed its plant to Hamilton after being in business for many years in Toronto. In Hamilton, the industry has been consolidated with the Dominion Sales Book Company, Burlington Road. L. M. Appleford, is the president of the amalgamated companies.

Dilts-



Stock travels faster in the New Dilts Beater

Two new type Dilts Beaters in a Canadian mill circulate stock in one minute and two seconds as against two minutes and ten seconds in their standard Hollander beaters. The stock is a furnish of pulp, paper stock, and clay, and figured nearly 7% density.

The above record is typical of the results obtained everywhere the new Dilts Beater has been installed.

It is proof of our claim that:

The new Dilts Beater greatly increases circulation.

It handles easily a much denser furnish of stock.

Mixing is thorough—beating is uniform. Roll speed is no faster than that of your present beater. No more power is required.

There is nothing "tricky" about the new Dilts Beater. It is the Hollander engine brought up to date. Write for a description.

"Your Paper is made in the Beaters"

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

7558

Recent Incorporations

THOMA & HEWITT PAPER BOX MFG. COMPANY, Buffalo, New York. Capital $25,000 to $50,000.

BERTIN MANUFACTURING CORPORATION, paper products. Capital $20,000. Incorporators O. Hertzwig, H. Schwartz, R. G. Zsewo. Attorney, J. S. Koenigsberg, 16 Whitehall Street, New York.

WETMORE, JANES & SUGDEN, Rochester, New York, make paper products; 150 shares first preferred and 70 second preferred $100 each, 150 common no par value. Incorporators, D. S. Wetmore, T. Sugden, R. B. Janes. Attorneys, Shedd, Morse, Pierson & Wynkoop, Rochester, N. Y.

LEWMAR PAPER COMPANY, 763 Broad street, Newark, New Jersey; manufacturing paper and paper products. Capital, $125,000.

THE GILES MANUFACTURING COMPANY, Houston, Texas. Capital, $5,000; purpose, manufacture machinery and paper specialties. Incorporators, W. B. Giles, E. C. Smith, E. F. Kavanaugh.

RAHMM, LACHMANN & COMPANY, New York, papers. Capital, $5,000. Incorporators, C. A. Brodek, R. H. Raphael, F. N. Howitt. Attorneys, Brodek & Raphael, 67 Wall street, New York.

News of the Baltimore Trade

[FROM OUR REGULAR CORRESPONDENT.]

BALTIMORE, Md., February 9, 1925.—With a favorable break in the last several days in the unusually severe period of bad weather, which was reflected generally in a keen depression in business of almost all kinds, an optimistic tone prevails in the paper trade in the Baltimore market. Several of the large houses have augmented their selling forces with the idea that much of the business lost through unfavorable weather effects in many lines of the trade can be quickly recovered now that the market has opened generally. Observers in the trade say that weather conditions have not had such an unfavorable effect here since 1918 when the unusually severe conditions of cold and snow was intensified by even more serious traffic tie-ups and transportation impediments than have prevailed since the first of 1925.

The February, 1925, price list and catalogue of the printing paper division of the B. F. Bond Paper Company of Baltimore has just been issued and has created considerable favorable comment. A feature of the new issue is the listing of the entire organization personnel of the company on the inside of the front page of the cover. This gives the officers, directors and the complete personnel of the fine paper department, the wrapping and specialty department, the announcement and card department, the bookkeeping department, the office and warehouse management, the city order department and the telephone exchange. The price list contains 87 papers and on the back of the booklet are printed the new lines added since the last price list was issued.

The Baxter Paper Company has acquired title to the property at 119 Commerce street, Baltimore, from the Sheridan Building Corporation, through the Maryland Title Guarantee Company. The lot, 23 by 89 fee is in fee-simple. The consideration was about $24,000. The company has occupied the property for some time.

Bids and Awards for Government Paper

WASHINGTON, D. C., February, 12, 1925.—The Government Printing Office has received the following bids for 77,800 pounds of kraft wrapping paper of various sizes: Old Dominion Paper Company 6.19 cents and 6.49 cents; Maurice O'Meara Company 6.3 cents; Barton Duer & Koch Paper Company 5.83 cents; Republic Bag and Paper Company 5.53 cents and 5.965 cents; Lindemeyr & Harker 6.255 cents; Reese & Reese 5.96 cents; Dobler & Mudge 6.5 cents; Royal Card and Paper Company 6.295 cents; Barton, Hobart Paper Company 6.4 cents; Mathers-Lamm Paper Company 5.42 cents.

The Kerr Paper Mills have been awarded the contract by the Government Printing Office for furnishing 40,000 pounds (16,000 sheets) of No. 2 quality, 25 x 30 inch No. 20 binders board at 3.175 cents per pound; bids for which were received on January 26.

Reese & Reese will furnish 5,400 pounds (150 reams) of 21 x 22—36, No. 20, blue sulphite writing paper at 8.36 cents per pound and the American Writing Paper Company will furnish 5,600 pounds of 22½ x 28½—140, jute tagboard at 10 cents per pound. Bids for these items were received on January 23.

Paper Drinking Cup Suits Filed

Suit has been filed by the Public Service Cup Company, the manufacturers of Lily drinking cups, against The Paper Utilities Corporation and Tulip Cup Corporation in the United States District Court for the Eastern District of New York.

The Lily company alleges in its complaint that it has made and sold billions of drinking cups of the familiar Lily design for which it holds a patent, and that the Tulip cup is so nearly identical in appearance with the Lily Cup as to infringe the patented Lily Cup.

The suit also alleged infringement of other patent rights, and charges that the name "Tulip" is a mere variation and an infringement of the registered trade mark on the Lily Cup.

Both companies manufacture in Bush Terminal, Brooklyn, N. Y.

Suit was also filed by the Dixie Drinking Cup Company of New York against the Tulip company under the patent of L. W. Luellen, who claims to be the originator of the present-day paper drinking cup. This patent is asserted to be the pioneer patent for the commercial one-piece paper drinking cups.

Both plaintiffs ask for injunctions and damages.

News Print Service Bureau Annual

At the annual meeting of the News Print Service Bureau held in Montreal on January 30 the usual routine business was transacted, the rate of the assessment fixed and the secretary's report submitted, an abstract of which appeared in The PAPER TRADE JOURNAL last week.

The present officers of the Bureau were all re-elected. They are:—President, George M. McKee, President of the Algonquin Paper Company, Ogdensburg, N. Y.; Vice President, Louis Bloch, president of the Crown Williamette Paper Company, San Francisco, Cal.; Secretary-Treasurer, R. S. Kellogg, 342 Madison avenue, New York City, N. Y.; executive committee: Chairman, P. B. Wilson, vice president of the Spanish River Pulp and Paper Mills, Sault Ste. Marie, Ont., W. E. Haskell, vice president of the International Paper Company, New York City, and J. Leonard Apedaile, Managing Director of Price Brothers Company, Ltd., Quebec.

Daniel M. Hicks, Inc., Entertains

Daniel M. Hicks, Inc. of 200 Fifth avenue, entertained a number of paper manufacturers who were in town Convention week, at a private banquet at the Pennsylvania Hotel on Wednesday evening.

The entertainment consisted of a colored Jazz orchestra with singing during the dinner, followed by a show from the Monte Carlo Revue and Ted Lewis' Revue.

A year ago, Daniel M. Hicks, Inc. held their first banquet at the Pennsylvania Hotel and it met with such hearty approval that it has now become a yearly event.

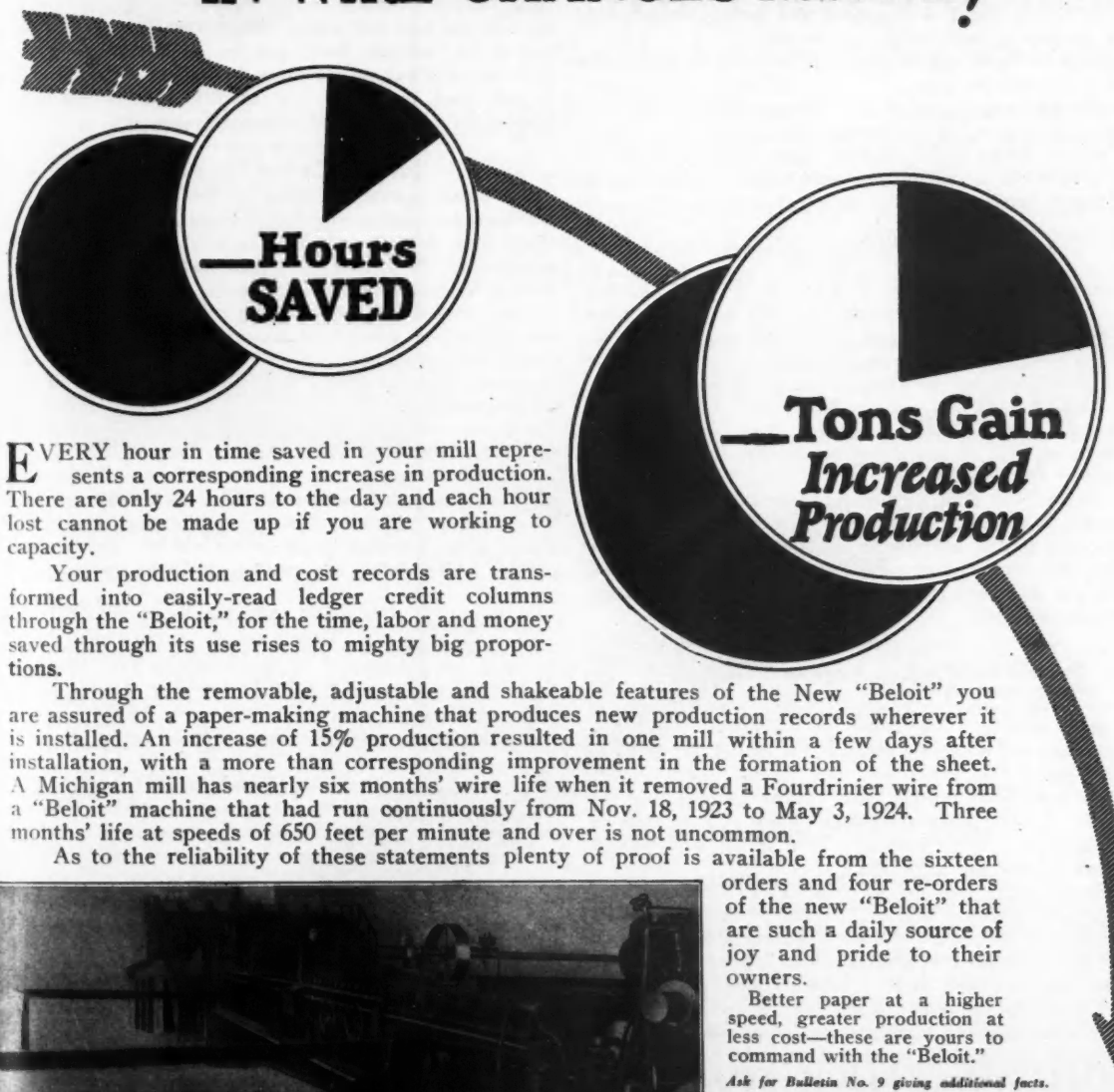
Simplification Program on Box Board

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 11, 1925.—Work on the simplification program of box board and containers is proceeding satisfactorily according to William A. Gately of the Simplified Practice Division of the Department of Commerce. It is probable that a joint conference between manufacturers and consumers will be held in New York City some time in March to complete as much of the Simplification Program as possible.

DOLLARS SAVED

IN WIRE CHANGES ALONE!



EVERY hour in time saved in your mill represents a corresponding increase in production. There are only 24 hours to the day and each hour lost cannot be made up if you are working to capacity.

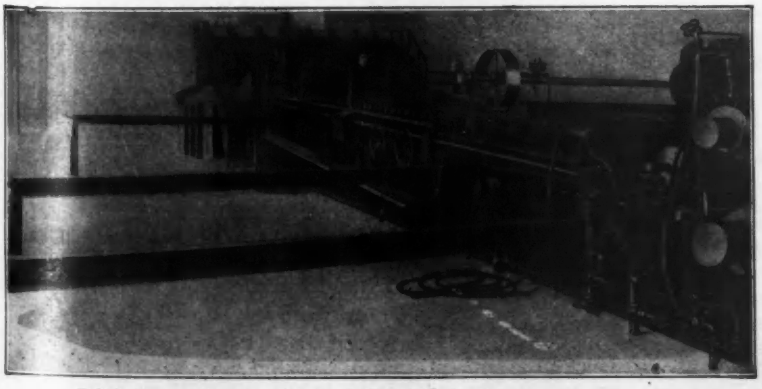
Your production and cost records are transformed into easily-read ledger credit columns through the "Beloit," for the time, labor and money saved through its use rises to mighty big proportions.

Through the removable, adjustable and shakeable features of the New "Beloit" you are assured of a paper-making machine that produces new production records wherever it is installed. An increase of 15% production resulted in one mill within a few days after installation, with a more than corresponding improvement in the formation of the sheet. A Michigan mill has nearly six months' wire life when it removed a Fourdrinier wire from a "Beloit" machine that had run continuously from Nov. 18, 1923 to May 3, 1924. Three months' life at speeds of 650 feet per minute and over is not uncommon.

As to the reliability of these statements plenty of proof is available from the sixteen orders and four re-orders of the new "Beloit" that are such a daily source of joy and pride to their owners.

Better paper at a higher speed, greater production at less cost—these are yours to command with the "Beloit."

Ask for Bulletin No. 9 giving additional facts.



Beloit Removable Fourdrinier With Rails in Place

The NEW BELOIT FOURDRINIER

Beloit Iron Works — **Established**

BELOIT IRON WORKS BELOIT WIS.

Beloit, Wis., U.S.A. — **Since 1858**

Obituary

Arthur Erwin Stevens

DETROIT, Mich., February 12, 1925.—Arthur Erwin Stevens, native Detroiter and vice-president of the Chope-Stevens Paper Company, died suddenly January 29 in his home, 617 West Hancock avenue. Heart disease was the cause. He was 56 years old. Mr. Stevens had been identified with the Chope-Stevens company practically throughout his business career. Until recently he was a director of the Board of Commerce and actively interested in the city's expansion, industrially and otherwise.

Prominent in social and fraternal circles, Mr. Stevens was a member of the Palestine lodge, A. F. and A. M. King Cyrus chapter, the Detroit commandery, the Masonic Temple building committee, the Sons of Revolution and the Detroit Athletic Club.

His widow, Susan Brodie Stevens, three daughters and one brother survive: Mrs. Dorothy Buchanan, Mrs. Margery Mather, Mrs. Suzanne Wesinger and George, all of Detroit.

Mrs. N. W. Brisbois

KALAMAZOO, Mich., February 9, 1925.—Mrs. N. M. Brisbois died at Stockton, Calif., after a three days' illness of pneumonia and heart trouble. She was about 30 years of age.

Mr. and Mrs. Brisbois came to Kalamazoo about seven years ago and immediately took an active part in the affairs of the community. Mr. Brisbois, first with the Kalamazoo Vegetable Parchment Company, later went to the Sutherland Paper Company as general superintendent. He left Kalamazoo to take the management of a plant in Stockton.

Mrs. Brisbois was a member of St. Augustine's church. She was enrolled in the Altar society and the Catholic Daughters of America. She was in addition an active worker in the Alliance Francaise. Shortly before her departure from Kalamazoo for the west, she was the victim of a serious illness. This tended to impair her general health.

News of the Los Angeles Trade

Business in the paper line in Los Angeles remains steady, but by no means rushing. The volume of business is maintaining a good average, and is slightly ahead of the figures for the same period last year. Fine papers are quiet although small volumes of business have been reported from various quarters. In the coarse paper division things are looking better and the trade is generally optimistic. Prices remain the same as last week without a single break along the entire line.

J. Y. Baruh, manager of the Zellerbach Paper Company, is in San Francisco attending a director's meeting of the company.

On January 4, the S. D. Warren Company film on "Paper Making" was presented by Ross McPhee before the class in journalism and advertising at the University of Southern California. The purpose of presenting this film to the class was to enable it to obtain a keener insight into the actual making of paper and to teach the members the importance of paper in the business world.

R. K. Erlandson, manager of fine paper, Blake, Moffitt & Towne, has left for an extended trip to the North.

L. P. Sine, local representative of L. L. Brown Company of Adams, Mass., and Peerless Paper Company of Dayton, has left for an extensive trip to Chicago and other eastern points. While in Chicago he will attend a directors' meeting of the Messenger Paper Company.

Effective at once Horace Gimlin, formerly of Dwight Brothers, Chicago, will be connected with the General Paper Company at San Francisco.

Edgar S. Bliss, president of the Worthy Paper Company, Mittineague, Mass., is a Los Angeles visitor. He will return to the East by way of Panama Canal.

C. W. Dearden, Sales Promotion Manager of the Strathmore Paper Company, who recently visited on the coast, stopped off in Los Angeles long enough to deliver an address to the paper trade and printers on the subject of "Paper Is Part of the Picture."

Zellerbach's house organ, "The Informant," with its January appearance, is considered one of the finest print jobs produced in some time. The cover is printed with three zinco plates, namely —blue, purple and gold, but a fourth color effect is gained by using Turquoise Buckeye Cover. An old Spanish galleon is bounding over the deep blue waves, heading toward the distant horizon. Beyond the immediate foreground, the sea, in a deep purple, is depicted as calm and passive while the horizon, the purple blending into the gold, makes the total effect a gorgeous tribute to the printing art when combined with good paper.

Toronto Carton Council Meets

The regular quarterly meeting of the Toronto Carton Council took place last week at the King Edward hotel. Reports were received from the various committees which gave a forecast of the activities of the council at present under way. The five pin bowling league has been a great success. Representatives of each company gave a brief talk regarding prospects for the present year and the opinion generally expressed was that 1925 would be a decided improvement over 1924. Prof. W. H. Greaves, of Victoria University, gave an address on "Public Speaking." S. J. Frame, secretary-treasurer of the Canadian Paper Box Manufacturers' Association, presented an interesting report. George Hancock, president of the Association, spoke on "present and future conditions in the industry," and J. R. Forth of the A. D. Shoup Company, Toronto, gave an address on "How can we improve the paper box industry?" He said that roughly speaking there were two million dollars invested locally in the industry and between one and two million dollars invested by out-of-town members.

Vortex Absorbs Burt

The Vortex Manufacturing Company of Chicago has acquired the entire cup business of F. N. Burt Company, Ltd. The purchase includes the good-will of the Burt Company and the latter has withdrawn its appeal from the decision of the United States in the suit of the Vortex Manufacturing Company against F. N. Burt Company, Ltd.

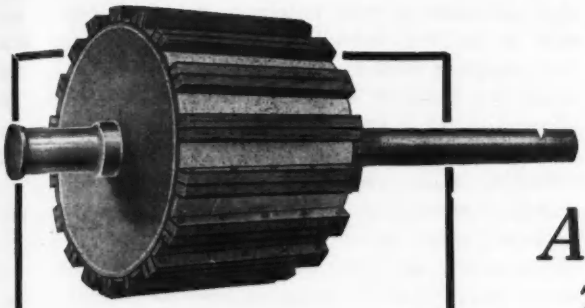
The business of the Vortex Manufacturing Company has been steadily increasing in volume for some years and this enlarging of their facilities and outlets for handling the drinking cup business insures them increased volume and prestige in a field in which they were already a leading factor. All communications and matters pertaining to the F. N. Burt Company's former cup business and all future orders should therefore be sent to the Vortex Manufacturing Company, 421 North Western avenue, Chicago.

Simplex Paper Corp. Increases Stock

Simplex Paper Corporation, Palmyra, Mich., makers of kraft papers, has increased its capital stock from $50,000 to $200,000. At the same time it has purchased a factory building in Monroe, formerly occupied by the Union Electric Refrigerator Company and will expend $65,000 for alterations and machinery. The mill at Palmyra has a production capacity of four to five tons daily.

A. J. O'Grady Recovers Health

A. J. O'Grady, night superintendent for the Oswego Falls Corporation who suffered a general break down in health a few months ago has recovered and will soon be back in his old time form again. Mr. O'Grady was with the Oswego Falls Corporation a number of years and was considered an expert on board. He is undecided on his plans for the future.



DOWD
Cluster Filling

Made to fit any Bar Filled Roll. Designed to produce long fibered stock resulting in stronger paper. Used by leading Paper Mills all over the United States.

DOWD
Corundum Bed Plates

Dowd Corundum Bed Plates will prove most advantageous on Kraft Tissue or any sulphite or sulphate stock. Heat treated Beater Bars, all styles, built to withstand the longest and hardest service.

R.J. DOWD KNIFE WORKS EST'D MACHINE KNIVES 1847 BELOIT WIS

A New Steel Formula

That Has Set New Cutting Standards

NEARLY all paper cutting knives look alike and cost about the same, but there's a mighty big difference when it comes to actual performance—you can always depend upon a Dowd Knife to give the most service with the least regrinding.

Chipper and Rag Knives furnished from either Solid Steel or Plated Stock.

The new

"Special A"

10 Day FREE Trial

Dowd Products sell themselves in service. We are so certain of their quality and performance that we are willing to let you test them thoroughly and judge their merits in your own mill at our risk.

R.J. DOWD KNIFE WORKS
Beloit, Wisconsin

DOWD

MAKERS OF HIGH QUALITY KNIVES SINCE 1847

Editorial

Vol. LXXX New York, February 12, 1925 No. 7

HENRY J. BERGER, Editor

CANADA SHOULD BE FRIENDLY

American paper manufacturers were greatly encouraged in their fight against the proposed embargo or export duty on pulpwood from freehold lands in Canada by the strong address on this subject by United States Senator Moses of New Hampshire at the annual dinner of the American Paper and Pulp Association last week. The resolution against the proposed measure adopted at the convention of the Association during the day was reaffirmed at the dinner in a most unmistakable manner, the representative of this paper who covered the meeting stating in his report that "a rising vote was taken and if anyone present failed to endorse the resolution, he escaped the writer's attention."

No matter affecting the welfare of the paper industry of the United States has probably so greatly stirred the paper men here since the famous Taft Reciprocity fiasco with Canada back in 1911. It will be remembered that this was a piece of stupidity which allowed paper under 4 cents per pound to come into the United States free of duty with no compensation whatsoever from Canada and which led the PAPER TRADE JOURNAL at that time to assert that we were making a present of our big news print industry to our neighbor across the line.

To refresh memory on this measure, a brief summary of it is presented herewith from the PAPER TRADE JOURNAL of September 21, 1911.

"The situation may thus be summarized: The Governments of the United States and Canada having decided that a reciprocal trade arrangement between the two countries would be mutually beneficial, appointed commissioners, who met and arranged details which were finally approved by the respective administrations of the Dominion and the United States. This agreement provided for a mutual customs tariff reduction on a number of food products, raw and manufactured, agricultural implements and a few manufactured articles of general utility, and in the removal of the duty by both countries on live animals, grain, fish, vegetables, seeds and lumber. It was also agreed between the commissioners that pulp and paper (the latter valued at not more than 4 cents per pound) when the product of Canada, and upon which no export tax or other export restrictions were levied, should be admitted free into the United States. It was also agreed at the same time that when the restrictions as to the export of pulpwood imposed by the Canadian provinces should be removed, and when per consequence of this removal the United States had abolished the existing countervailing tax on the pulp and paper made from this wood, then there should be free trade in all lines of paper between the two countries.

"Thus was the agreement drawn by the commissioners and approved by the Executives of the United States and Canada. But when the bill was introduced to make the tariff change legal, Congress struck out all reference to pulp and paper from the body of the document and made of them a second section which provided for the free admission of Canadian pulp and paper made from wood upon which there was no export restriction, regardless of any act whatsoever by the Dominion. In other words, the "Reciprocity" bill, as passed by Congress and signed by the President on July 26 last, removed the duty on pulp and paper, the product of Canada (when free from export restrictions), without requiring any compensatory concession. This having been the desire of Congress and the Administration, the tariff change in respect to pulp and paper became operative immediately upon passage of the bill on July 26 last, and since that day this country has enjoyed the benefit (?) of free wood pulp and news print paper, while the Canadian duties on all American products have remained as heretofore. So far as concerns the customs duties on pulp and paper, the result of the Canadian elections today (Thursday, September 21,) will have no effect except that it may happen that if the Dominion rejects the reciprocal agreement, the other nations may object to what would undoubtedly be a breach of the favored nation treaties, in that the United States had given Canada something for nothing and so discriminated against them. It might in this way happen that Congress would be forced to abrogate the act of July 26, or place all nations on the same footing as Canada in respect to pulp and paper."

To complete the story, it need only be mentioned that when the vote was taken in Canada the people there overwhelmingly turned down the measure.

To show how correct was the prophecy of the PAPER TRADE JOURNAL in stating that the United States was making a present of its news print industry to Canada, it may be stated that only three news print mills, if memory serves correctly, have been built in this country since 1911 as follows: The Northwest Paper Company, Cloquet, Minn.; The Manistique Pulp and Paper Company, Manistique, Mich., and the Algonquin Paper Corporation, Ogdensburg, N. Y. News print production in Canada, according to some authorities, last year for the first time in its history, exceeded that of the United States. This is probably a slight exaggeration, however, as according to what is probably the most reliable authority, the production of news print in the United States in 1924 was 1,471,000 tons and in Canada 1,353,000 tons. However, all facts and figures indicate plainly enough that Canada is making surprisingly good headway so far as news print is concerned.

We are not jealous of our neighbor's prosperity, and refer to it simply to show that in the past we have been unusually generous. Canada should remember that in order to have friends, she must be friendly and that judging from Senator Moses' speech, the present administration in the present instance will not be as stupid as were former President Taft and his "Democratic allies" in 1911.

NEWS THAT IS ENCOURAGING

While the first few weeks of 1925 have accomplished nothing spectacular in the paper industry there is nothing disheartening in what has happened and there is much to promote confidence and assurance.

From reports coming to the PAPER TRADE JOURNAL it is evident

that the business which is now finding its way to most of the paper mill supply houses is very satisfactory and its volume is large. There is no indication of a boom but the average business man realizes that a boom is the last thing in the world to give real and permanent stimulation to business. What business wants is dependable times—not mushroom or boom activity.

Individual orders at the present time are not much larger than they were six months ago but the increase in totals is general and that applies to all sections of the country. Some houses report a 25 per cent increase over the corresponding period of 1924 but none of this is attributed to any one branch of the paper industry. Tissue, board, news and pretty much everything else seems to share in the general business improvement. And it is an indication of the solid tone of the market that no one is being stampeded.

Another encouraging sign is that orders are practically for immediate needs. True it is that there is more buying for the future than there has been for a long time and yet future buying is an infinitesimal part of the business placed. This is a fair barometer for it shows that the buyers are not wanting for immediate needs and that things are bound to rush ahead just as soon as future buying becomes really rampant which is likely to happen almost any time.

Publishers of "Liberty" Reply to Criticisms

MONTREAL, Que., February 12, 1925.—The publishers of "Liberty" have issued a reply to the criticisms as to the location of their new paper mill being in Tonawanda, N. Y., instead of in Canadian territory. It will be remembered that the advocates of an embargo on pulpwood in this country declared that this was a glaring instance of robbing Canadian forests to feed American industry, as the owners of "Liberty" had large limits in Quebec Province, and had contracted to manufacture the wood into pulp on this side. The Quebec *Telegraph* wrote to the publishers of "Liberty" asking if they wished to publish a reply. Here is the reply received:

"In reply to your considerate letter we beg to say that the clipping you enclose misreads the advertisement of 'Liberty.'

"The owners of 'Liberty' own three limits on the North Shore of the Gulf of St. Lawrence and a plot of freehold land. They have developed two of the limits and the freehold property and for six years have been shipping wood to the mill at Thorold, Ontario. It is at that mill that the steamer in the picture is discharging.

"The mill at Tonawanda has been making paper for one month but has received all its pulp either from the mill at Thorold or some other pulp mill. It has not consumed a stick of pulpwood from any source.

"The manager plans, when the mill is entirely finished, to obtain his sulphite and ground wood, three-quarters of the whole, from the mill at Thorold and to manufacture the soda pulp, one-fourth of the total, at the Tonawanda mill. We will then consume five hundred cords of valuable wood only at Thorold and twenty cords of cheap wood at Tonawanda.

"Soda pulp, as you are aware, can be made from birch, maple, and other woods of little value, even weed woods, like poplar, that are being cut in some places to make room for valuable species. This wood will be brought from whichever place it can be obtained most cheaply.

"At the Manicouagan, to which the article alludes, we are at work developing a water power and ground wood mill to be in operation not later than 1929.

"We do not plan to ship any unmanufactured wood from this river. The other rivers are too small to support and operate ground wood mills.

"We have taken no part in the debate over the embargo. We can accommodate ourselves to the laws as well as any competitors. We feel, however, that if a tariff war is started between Canada and the United States it cannot but hurt industries like our mills that depend upon Canada for wood, the United States for coal and the United States for their market."

The Stuff Box

The Bird Machine Company, of East Walpole, Mass., has just issued Number 1 of the *Stuff Box*, a little house organ which is to be issued regularly. In the introductory editorial the editors in part say:—

"The editorial board of 'The Stuff Box,' composed of men whose life work has been identified with the paper industry, will make it their duty to cover this entire field and present the gleanings with references to original sources in tabloid form, and thus make it easier for the paper maker to keep up with the times, more or less as the 'Literary Digest' helps its readers to keep in touch with current events of the world at large.

"We will be grateful if all paper and pulp mills that publish house organs for their employees will put us on their exchange list, for a number of very live periodicals of this sort are being published throughout the land, which frequently contain material worthy of a wider broadcasting.

"The circulation of 'The Stuff Box' will be limited only by the number of workers and thinkers in the paper industry who wish to become its readers. For this reason we are enclosing a blank for names and addresses which you are invited to fill in and return to us. There is no charge,—we ask you in return only to give us a hearing and the chance to be helpful, and of course we would be pleased if you take the trouble to let us know what you think of Number 1, and how the idea 'The Stuff Box' strikes you."

A particularly good feature of this number is "Worthwhile Reading in the December Trade Journals," which gives a brief synopsis of all the more important articles printed in the paper trade publications during the month of December. The *Stuff Box*, if succeeding numbers are as good as the initial one, as they are likely to be, will be gladly received regularly by the readers to whom it is intended to appeal.

Heads Thacker-Craig Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

SPRINGFIELD, Mass., February 12, 1925.—William R. Thacker was elected president of the Thacker-Craig Paper Company at the annual meeting of the company last week, succeeding the late William Craig of Chicopee. Mr. Thacker will continue to act as treasurer of the company. Arthur E. Braman who has been suburban salesman has been promoted to manager.

Since March 1, 1908, Messrs. Craig and Thacker were associated in what was virtually a partnership arrangement though acting under a corporate organization. Previously both had been 12 years with the R. W. Carter Paper Company. Mr. Thacker had been credit manager and Mr. Craig head of the shipping department. The new company started at 109 Bridge street and now is located at 37-39 Taylor street.

Survey of World Paper Production

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 11, 1925.—An interesting survey is under way by the Paper Division of the Department of Commerce in connection with world production of paper, potential production, consumption, and exports.

A series of bulletins will be worked out for each country following which a single publication will be compiled. It is expected that it will take about five months to complete this work. This will undoubtedly be one of the most interesting pieces of work which the Paper Division has yet accomplished since its establishment.

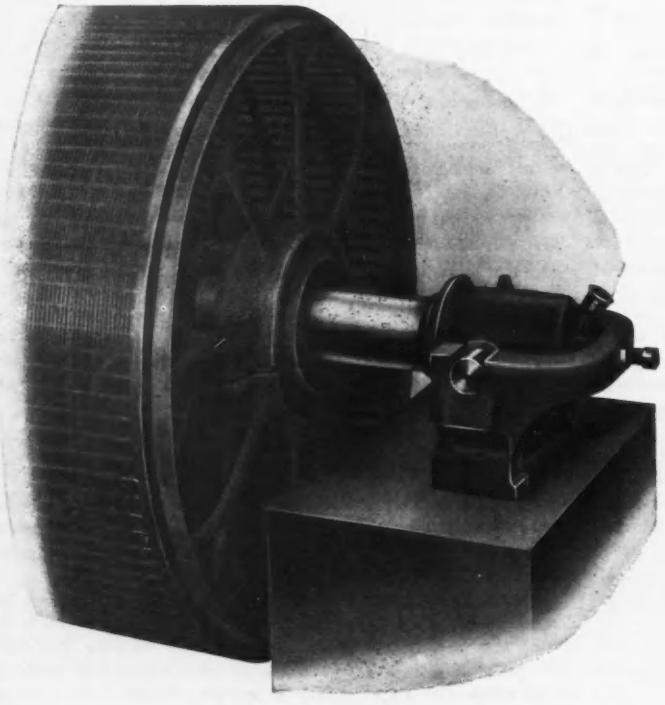
Soda Ash **Bicarbonate of Soda** **Caustic Soda**
Modified Soda **Special Alkali**

ALKALI

QUALITY

The additional value in Diamond Alkalies that maintains them as the Standard.

DIAMOND ALKALI COMPANY
PITTSBURGH, PA.



Just what you are looking for Anti-friction cylinder mold bearing that has never known to give any trouble.

Precision built Cylinder Molds to meet exacting demands.

Keep your product up to quality and capacity by using our Paper Machines and equipment.

The Black-Clawson Co.
HAMILTON, OHIO

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

TENDICK'S ROSIN SIZE COLOR TESTING METHOD

By Materials Testing Committee, H. U. Kiely, Chairman

Weigh out 83.3 grams of size paste (60 per cent dry) and gradually add water at 120° F. stirring the mixture thoroughly. Make up finally to a volume of 1 liter. This gives an "emulsion" containing 5 per cent total solids. If this emulsion is a bright, white color it indicates a satisfactory size. If, however, the color is more or less yellow, or has a muddy appearance it may be due to low grade rosin, low free rosin content, or both. The following test should be made on all samples of rosin size.

Measure out 10cc of the 5 per cent emulsion, dilute to 100cc and add several cc. of 10 per cent acetic with stirring until all of the rosin is precipitated. Filter off the rosin, fold the filter paper and press between blotting paper, open the filter flat and allow to dry at room temperature. (Drying temperatures of 95° F. and over will cause the finely divided rosin to fuse together and become yellow). A satisfactory size should give a bright, white precipitate in this test. If the dried precipitate has a yellowish or grayish tint, or breaks with a brown, resinous fracture, it is unsatisfactory.

A further check on the color of the size is made as follows: In a separatory funnel pour about 25cc saturated salt (NaCl) solution and 5cc of 50 per cent acetic acid. Then add 25cc of water white toluene and by means of a pipette, 10cc of the rosin size emulsion. Give the separatory funnel a swirling motion for several minutes to allow the toluene to dissolve all rosin, separate the aqueous layer, pour the toluene extract through a dry filter, catching the clear filtrate in a 50cc Nessler tube. A satisfactory size should give only a light green or light lemon yellow colored extract. The poorer the grade of rosin used in a batch of size, the darker will be the toluene extract which contains all the coloring matter as well as the abietic acid. This latter test is most useful for comparing two samples of size and is very rapid.

Testing the Porosity of Papermakers' Felts

The Albany Felt Company, manufacturers of papermakers' felts and jackets, has developed a novel machine for testing the porosity of felts. The machine was designed by Prof. George B. Haven, of the Massachusetts Institute of Technology. About five years ago the Albany Felt Company became interested in the solution of certain novel and difficult questions relative to the manufacture of the woolen felts and jackets for use on papermachines. These fabrics made of the finest wool are frequently woven to widths of 30 feet or more. Their use on the papermachine requires shrinking, fulling and finishing with unusual accuracy and the resultant strength and porosity is of very great importance.

Aside from their tensile strength and enduring qualities porosity is one of the chief requisites of these felts and some means of measuring and standardizing the porosity of various weaves and weights was sought. It was the company's desire to measure the porosity of every felt after fulling and finishing. Since the felts were supposed to be subject to water porosity in their actual use in the papermachine it was natural that water should be used as the medium by which the porosity should be measured in actual practice.

Experts from the Massachussetts Institute of Technology were called upon to take this matter in hand and at once established the fact that tests upon a finished felt with water as the means of measuring porosity would injure its finish locally and interfere in a measure with its use on the papermachine. Measuremetns of water porosity were therefore discarded and the question was laid aside for a time.

Later the Albany Felt Company installed modern and well equipped laboratories in its own plant and built up eventually a staff of trained experts. Last year the subject was again taken up and Professor Haven was commissioned to design and construct a machine in which the finished felt could be inserted and the porosity measured and recorded automatically, the process being such that no injury would accrue to the felt or its future usefulness.

In the early experiments it had been proven by use of distilled water that porosity to air and water were definitely related for the entire range of felts manufactured by the Albany Felt Company. With the results of these earlier experiments as a basis, it was decided to discard tests upon water porosity because of the injury to the finish by such tests and to conduct all future tests with air as a medium. It was the expectation that tests could be carried out upon the finished felts and jackets in such a manner as to cause no injury or mark upon the wool fiber.

A machine was designed and constructed, and much of the fine machine work and all of the assembling and adjustment were done in the machine tool laboratories of the Massachussetts Institute of Technology. The porosity machine was completed and turned over to the company about six months ago and since that time practically all felts delivered by the firm have been measured for porosity therein.

REPORT OF COMMITTEE ON ABSTRACTS AND BIBLIOGRAPHY

By Clarence J. West, Chairman

During the year 1924, the Committee on Abstracts and Bibliography made the following contributions to the columns of the Technical Section (Paper Trade Journal): 22 pages of abstracts of periodical literature and patents in volume 78 and 56 pages in volume 79; a bibliography for paper making for 1923, which was reprinted in the Technical Association Papers, Series VII, p. 106-132, from the Paper Trade Journal, volume 78; a bibliography on rubber latex in paper making (79, no. 7, 45-46 (Aug. 14, 1924) and one on the chlorine process (79, no. 12, 43-44 (Oct. 12, 1924). Indexes have been prepared for the two volumes (78 and 79) of the Technical Section. Although it is possibly beyond the scope of the work of the Committee, mention might be made of the fact that the individual members have prepared a number of translations from foreign articles, thus making available to American readers the more important results of investigations in other countries.

The work of this Committee is undoubtedly the least spectacular of all the Committees of the Technical Association and we may therefore be pardoned, we hope, if we take this occasion to comment on it. Through the painstaking work of the individual members of the Committee (Messrs. Bartholow, Caust, Papineau-Couture and Parsons), there is provided an abstract of practically every article and patent, published in American and foreign journals, on the subjects relating directly to paper making. A perusal of these abstracts will enable the reader to determine whether he is interested in securing the complete article with all the experimental details. If the magazine in question is not readily accesible, it may either be borrowed from the Chairman of the Committee or obtained from him in the form of photostats (at the rate of 15 cents per page); if the article is in a foreign language, translations will be furnished at a moderate cost. This program thus gives every member access to the most recent developments in pulp and paper manufacture and enables him to keep abreast of the times, if he so desires.

Beginning with 1922, an index has been prepared for each volume of the Technical Section, thus making available in a convenient form the original matter and abstracts therein contained. At the present time it does not seem feasible to attempt to assemble and reprint the abstracts at the end of the year and therefore every member should make it a point to preserve his copy of the Technical Section as it appears and then bind them, with the index for future reference. A man's interests may change with the years, and many references to the new problems can be gathered by consulting the back volumes of the Section.

Apologies are not in good taste, perhaps, but it is felt that an apology is due the Association for the small amount of bibliographical work accomplished the past year, the excuse is that the Chairman in cooperation with D. D. Berolzheimer of Woodmere, L. I., has completed and is seeing through the press a bibliography of bibliographies on chemistry and chemical technology, comprising some 9,000 entries; this has taken all his spare time. The idea of a collective and comprehensive bibliography of paper making for the period 1900-1925 has not been forgotten and it is hoped that some, if not substantial progress may be made upon this project this year.

There have been the usual number of inquiries for the loan of magazines, photostat articles, references and special information relating to the industry, even more than last year. The Chairman has done the best he could with these, considering his limited time which can be devoted to such matters and the difficulty of locating certain kinds of information. He asks the indulgence of the members, assuring them that he will serve the Association to the best of his ability.

REPORT OF COMMITTEE ON MECHANICAL PULP

By W. E. Brawn, Chairman

The Technical Association is meeting this year for its tenth annual convention, and during the past decade, all branches of the pulp and paper industry have experienced the greatest development in its history.

Developments in the manufacture of groundwood pulp have been many, both in regard to production and quality, and we now find this branch at the highest peak it has known.

Development Along Productive Lines

The development along productive lines has not only been by the erection of new mills and addition of grinding units, but has also been by the increasing of production in units already installed. This has primarily been made necessary because of new requirements of paper machines brought about by speeding up old machines or the erection of new ones designed to run at higher speeds than normally was the practice. Development in grinder types has also been made and we now have many installations grinding four-foot wood of the magazine class both intermittent and continuous feed. These newer designs have resulted in lower power and labor costs per ton and increased production of units.

Improvement in groundwood quality has been necessary to keep pace with the new conditions, and we now find close attention being paid to wood conditions, speed pressure, and stone-sharpening regulations, to produce uniform pulp of desired freeness and character of fiber. The advantages of motor-driven units have been recognized, and speed regulation of waterwheel-driven units has been greatly benefited by the development of satisfactory governors for this type of installation.

The importance of the ratio of grinding speed to grinding pressure expressed in the proper units for any particular power input has been shown, and greater attention is being paid to this factor, both from the standpoint of maximum production and uniformity of quality. Control systems are now in use by a great number of mills, and freeness testing by regular and systematic methods has produced excellent results where heretofore opinion and guesswork were the chief guides.

Investigations of Various Natures

The Mechanical Pulp Committee during the past few years has undertaken investigations of various natures, and has brought before the Association several developments of importance. Investigations have been made in stone-sharpening systems, freeness testing and control systems, white water utilization, efficiency of various types of grinders, and so on; and has brought out the benefits to be obtained. Much valuable information has been obtained on conservation of pulp from losses due to decay in storage, prevention of stock losses in mills, and developments in auxiliary equipment.

The Committee during the present year has sought to carry on some of the investigations previously started, until definite conclusions and recommendations could be made. Its work this year has been on three subjects, none of which has been completed, but on which much progress has been made. These are,—

(1) Development of a Standard Freeness Testing Equipment and Method.

(2) Comparison of all Types and Classes of Grinders from Economic Standpoint.

(3) Investigation of Refiners and Refining Practices for Groundwood Rejections.

Standard Freeness Testing

On the first subject, the work has only reached the point of a general survey of all the types of equipment in use and the various methods in use, both for laboratory and control systems. It is planned to recommend an equipment of standard construction and a standard procedure, so that the units may be the same and comparable, one mill with another, and to work this problem out in conjunction with the Committee on Standard Methods of Testing Materials.

Types and Classes of Grinders

On the second subject, considerable work has been done in the past and a partial report has been made. Recently there have been some improvements made in grinder types, particularly in the magazine grinders which are said to result in greater production and less power. There is also a possibility that production may be increased, and operating costs of older types of grinders may be lowered to compare more favorably with the machines of later design. Data are now being collected with a view of interpreting the facts on an economic basis.

Refiners and Refining Practice

On the third subject—that of refiners—a preliminary report will be read later at the sectional meeting. This report shows that the screening system itself has much to do with determining what use shall be made of a refiner, as well as the disposal of refined stock. It is also shown that an investigation of types of screening systems must accompany the investigation of refiners, and that the quality of paper manufactured determines the use of a refiner.

An Artificial Grindstone

In addition to the above, the Committee has been interested in the development of an artificial grindstone which when perfected, promises to provide the grinder with a stone or any kind of grit and binder that is wanted, with exceptional wearing qualities.

The Committee plans to pursue these subjects to completion during the coming year, and will welcome assistance in its efforts and any suggestions whereby it may be of greater service to the industry in general.

THE GLARIMETER AND THE MEASUREMENT OF THE FINISH OF PAPER*

By R. E. Lofton[1]

The term "finish" as applied to paper has reference to the character of the surface of the paper—to its smoothness, or freedom from irregularities. The finish of paper varies from a dull, mat surface, such as that of a soft blotting paper, to a smooth, highly polished surface, such as that of a coated, super-calendered book paper. A paper having a "high finish" has been subjected to a finishing process the purpose of which is to smooth or iron out the surface irregularities. The degree of finish given to the paper becomes evident as gloss when the sheet of paper is held before the eyes and toward the light at the proper angle.

Ingersoll Glarimeter

The Ingersoll Glarimeter is an instrument designed to measure the gloss from the surface of paper and other nonmetallic surfaces. It does not give an absolute measure of the gloss, but only the ratio of the amount of light reflected as gloss to the total amount reflected. Fig. 1 is a cross-sectional view of the new type Glarimeter now being supplied to the trade.

It should be noted that a measure of the gloss of paper is a measure of the "optical finish" of the paper and not necessarily of its "mechanical finish," the quality the printer is most interested in. It is claimed that the Glarimeter will measure the mechanical finish. The relation between the two qualities has not been determined.

Theory and Development of Glarimeter

One may recognize three different types of reflection from reflecting surfaces: (1) diffuse or scattered reflection—that from the surface of coarsely ground glass, from a plush fabric, or coarse blotting paper; (2) regular or specular reflection—that from polished metal or glass surfaces, and the gloss or glare from highly polished paper surfaces; and (3) a combination of the two kinds of reflection just described.

It has just been suggested that specular reflection is the glare or gloss given off by a sheet of paper. It has been found by experiments that light specularly reflected from the surface of a sheet of paper at an angle of 57½ degrees is almost completely plane-polarized, that is, it travels in one plane only, instead of in all planes as it formerly did. In order to determine the amount of gloss, therefore, it is only necessary to determine the amount of light polarized by reflection at this angle from the sheet of paper. This is done by allowing a beam of light to fall at an angle of 57½ degrees onto the sheet of paper so that it will be reflected into a photometer or polarimeter at this same angle. This is the principle upon which the Ingersoll Glarimeter is constructed.

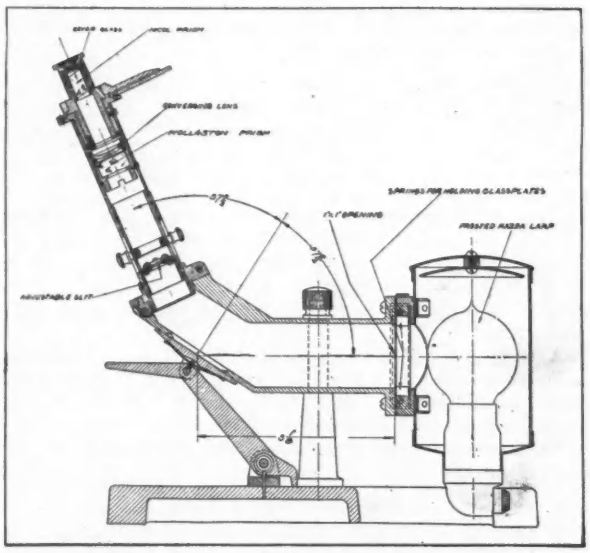


Fig. 1

The gloss determinations are made by matching the two half-

* This is a preprint of a report submitted to the Chairman of the Paper Testing Committee, TAPPI, and is subject to revision before publication.

[1] Associate Physicist, Bureau of Standards.

fields of view in the photometer for light intensity, and noting the resulting scale setting in degrees. If it is desired to express the result as per cent gloss, the gloss in degrees may be converted to per cent gloss by the following formula:

Per cent gloss = cos 2 (60° — scale setting).

A much easier and quicker way to make this conversion, however, is to construct a curve on coordinate paper showing the relation between the scale settings and per cent gloss. The points which determine the curve may be found by substituting the various possible scale settings, say, in units of 5 degrees, from 15 to 60 degrees, in the formula given above, and solving for per cent gloss represented by each value substituted. The values found are then used in constructing a curve from which the per cent gloss for any scale setting may be taken directly. Such a curve is shown in the accompanying figure. (Fig. 2).

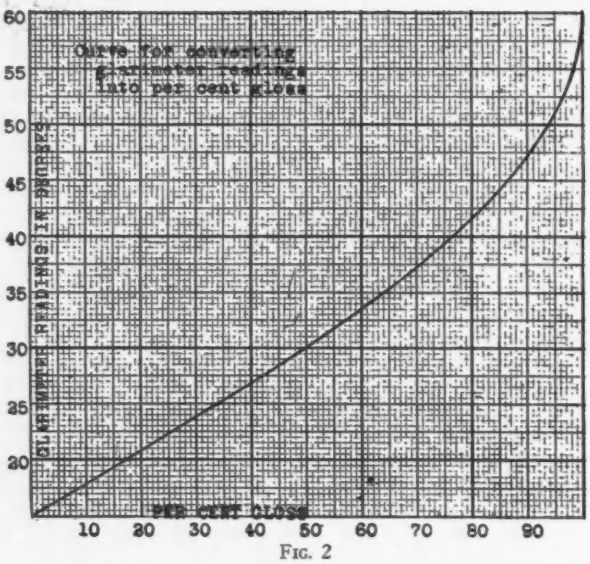


FIG. 2

There are in use two types of construction of the Glarimeter: (1) the old type, the optical parts of which are housed in a wooden box, referred to in this paper as "old type"; and (2) the all-metal type, referred to in this paper as "new type." Illustrations of both types may be found in the literature cited at the end of this article.

A study has recently been made of five Ingersoll Glarimeters with the purpose of determining whether each of these instruments would check the others, and whether different observers could check one another, in measuring the finish of paper. Two of these instruments were of the old type of construction, and three were of the new type.

Method of Making Tests

In carrying out the tests, the instruments were placed in a row on a laboratory work bench in a room artificially lighted. Three samples of paper were tested: (1) a white blotter, representing a paper of low finish; (2) a medium finish book; and (3) a coated and supercalendered book, representative of paper having a high finish. Five observations were made on each paper by each of three individuals[2] on each instrument. A small rectangle was roughly marked on each sample of paper and all measurements were made within this rectangle. The samples were always placed in the instruments in the same position, as nearly as possible, and with the same side of the paper exposed. This procedure was followed so as to have the same surface tested in each instrument, since the degree of finish varies with different locations on the surface of most papers, and sometimes on the two sides—felt and wire—and in the two directions—machine and cross.

In taking the observations, each individual took one of the samples to be tested and started at one end of the row of glarimeters, taking and recording one observation on each instrument, until five observations had been thus taken. He was followed immediately by the second and third observer who carried out the same procedure. Each observer then returned to the starting point and again observed and recorded a setting on each instrument. After five observations had been thus made on each instrument and recorded by each individual, the samples of paper were exchanged and five more readings were taken by each observer in the manner described above. Finally, a third exchange of samples was made, and each individual made and recorded five observations as before.

It should be stated that the observations were not made under the best conditions. It was necessary to have considerable light in the room in order that the observers might move about and carry on the work expeditiously. Moreover, the work was carried out too hurriedly to insure the most accurate results. For best results work of this nature should be done in a dark or dimly lighted room and under such circumstances that the observer may take as much time to make each observation as he feels is necessary. The results obtained, however, are comparable to those obtained in the usual course of routine testing.

Results of Tests

The results of the observations (see Tables 1 and 2) were very satisfactory. The investigation showed that the different instruments, when correctly adjusted, would check each other within reasonable limits.

TABLE 1—GLARIMETER READINGS WITH DIFFERENT INSTRUMENTS ARRANGED TO SHOW COMPARISON OF RESULTS OBTAINED BY EACH OBSERVER ON DIFFERENT SAMPLES OF PAPER.

	New type instrument			Old type instrument	
Degree of finish of paper	1 Deg.	2 Deg.	3 Deg.	4 Deg.	5 Deg.
		(Observer A)			
High	43.3	43.3	42.0	41.5	39.9
Medium	27.4	27.4	28.0	27.3	26.6
Low	18.1	18.4	19.4	18.3	17.9
Average	29.6	29.7	29.8	29.0	28.1
		(Observer B)			
High	42.9	43.3	42.9	41.8	40.7
Medium	27.9	27.9	28.7	28.1	27.8
Low	18.5	18.8	20.0	18.7	18.5
Average	29.8	30.0	30.5	29.5	29.0
		(Observer C)			
High	43.5	43.1	42.6	41.4	39.1
Medium	27.9	27.9	28.8	28.0	26.4
Low	18.2	18.1	19.7	18.8	16.8
Average	29.9	29.7	30.4	29.4	27.4
Grand average	29.8	29.8	30.2	29.3	28.2

TABLE 2—GLARIMETER READINGS WITH DIFFERENT INSTRUMENTS ARRANGED TO SHOW COMPARISON OF RESULTS OBTAINED BY DIFFERENT OBSERVERS ON EACH SAMPLE OF PAPER.

	New type instrument			Old type instrument	
	1 Deg.	2 Deg.	3 Deg.	4 Deg.	5 Deg.
		(High Finish)			
A	43.3	43.3	42.0	41.5	39.9
B	42.9	43.3	42.9	41.8	40.7
C	43.5	43.1	42.6	41.4	39.1
Average	43.2	43.2	42.5	41.6	39.9
		(Medium Finish)			
A	27.4	27.4	28.0	27.3	26.6
B	27.9	27.9	28.7	28.1	27.8
C	27.9	27.9	28.8	28.0	26.4
Average	27.7	27.7	28.5	27.8	26.9
		(Low Finish)			
A	18.1	18.4	19.4	18.3	17.9
B	18.5	18.8	20.0	18.7	18.5
C	18.2	18.1	19.7	18.8	16.8
Average	18.3	18.4	19.7	18.6	17.7
Grand average	29.7	29.8	30.2	29.3	28.2

Two new type instruments, which were kindly loaned by the manufacturer for this investigation, gave almost identical results when the averages of the three observers are considered. The averages for the high-finish book, as determined by these two instruments, were 43.2 degrees (83.0 per cent) gloss for each instrument; for the

[2] The writer acknowledges the valuable assistance of C. A. Fourness, of the Kimberly-Clark Company, Neenah, Wisconsin, and of C. S. Hornberger, of the Central Scientific Company, Chicago, Illinois, in carrying out this investigation.

medium-finish sample, 27.7 degrees (42.5 per cent) gloss for each instrument; and for the low-finish sample, 18.3 degrees and 18.4 degrees (11.7 per cent and 12.0 per cent, respectively) gloss.

It will be noted that instrument No. 3 (see Table 1) is somewhat inaccurate if No. 1 and No. 2 are regarded as standard. This is due to a slight error in design which did not permit of a sufficiently accurate adjustment of the polarimeter. It should be explained, however, that instrument No. 3 was the first of the new type instruments manufactured, and that this error in design was corrected in the subsequent manufacture of all Glarimeters.

The old type Glarimeters did not check so well with the new instruments, nor with each other. One gave an average difference of 1.6 degrees low from the averages of the two metal testers on the high-finish paper; on the other two papers it checked the new type instruments within one-fourth (¼) degree. The second old type Glarimeter gave average values about 1¼ degrees below the averages of those given by the two new type instruments; it was subsequently examined and found to be incorrectly set for the extinction point (60 degrees) by about this amount.

Although the old type Glarimeter will when properly adjusted, no doubt, give results which check with those given by the new type instrument now manufactured, nevertheless, it has some inherent defects which should be guarded against. The pieces of wood of which the box is made possibly become warped or displaced from their original position, causing the instrument to give inaccurate results. Such results may be obtained also if a thick sample of board or pulp or a number of sheets of paper are placed in the instrument, since the effect will be to change somewhat the angle at which the light falls on the surface of the paper, and also the angle at which the light is reflected into the photometer.

The agreement of the three observers was good. The average of each set of five observations by each observer taken with the three instruments in good adjustment differed by less than a degree in every case, and the averages of the differences between maxima and minima were less than 0.2 degree in each case. The observations from the two instruments found to be out of adjustment did not check so well, the average of the difference between the maximum and minimum for all observers being, in one case, about ¼ degree, and the other, a little more than ½ degree.

From a consideration of the results of this investigation it is concluded that the new type of Ingersoll Glarimeter is properly constructed and that satisfactory results in the determination of the finish of paper can be obtained by different operators with different instruments.

Calibration of the Glarimeter

The new type of Ingersoll Glarimeter should be equipped with a madza lamp, frosted round bulb 2 5/16 inches in diameter with distributed filament (¾ inch), 25 watts, 110 volts. This lamp is usually supplied under the following specifications: Frosted mazda B lamp, G 18½ bulb, 110 volt, 25 watt. This lamp should center in the line of illumination of the instrument and should appear to cover every part of the opening of the light-limiting screen when viewed from any point within ½ inch from the center of the opening of the sample holder.

The instrument is properly calibrated if the nicol prism is set for extinction when the pointer indicates 60 degrees on the scale. The condition of the instrument in this respect can be determined by placing in the holder a piece of very glossy paper, such as a glossy photographic paper. Several readings may then be taken on either side of the 60 degree position at which the two half-fields of the photometer are matched. The average of the settings on either side of 60 degrees should be 60. If the average of all settings is not within one or two tenths of a scale division of 60, the pointer should be set to the position for extinction at 60 degrees on the scale, or the instrument should be returned to the factory for adjustment, with a statement of the case to the manufacturer.

Recommended Test Procedure

It is necessary for reliable results that samples of paper to be tested for finish be kept perfectly clean and free from folds and wrinkles, that they be not exposed for any considerable time to extreme atmospheric conditions, and that they be handled very little or not at all with the fingers.

Tests should be carried out in a dimly lighted or dark room for best results.

In testing papers thin enough to be at all transparent, from two to several thicknesses of the sample must be used to preclude any possibility that the light will pass through the sample and be reflected from the metal holder back into the photometer.

It is recommended that five tests be made with the incident light falling along the machine direction of the sheet of paper, and five with the light falling across the machine direction; that both the felt and wire side of the sample be tested in this manner, making 20 tests in all on each sample; that the scale settings be read and recorded to one fifth degree; and that the results be reported as per cent gloss to one-tenth per cent. It is also recommended that after each scale setting the sample be shifted to a new position, so that a different spot on the sample will be tested at each of the twenty settings.

The average of the 20 readings is taken as the average finish of the paper. The difference between the averages of the readings on the felt side and those on the wire side is a measure of the difference in finish of the two sides. The average of the maximum differences recorded in each of the four sets of readings is a measure of the uniformity of the finish.

The necessity for testing the two directions of the paper is due to the fact that there is in some cases considerable differences in the finish when the light falls on the paper parellel with the paper machine direction and when it falls on the paper in the cross direction. This is caused by more fibers lying in one direction of paper than in the other direction, since the finish values will be higher if the light falls along the fibers than if it falls across them.

Summary

This article discusses the effect of the finish of paper upon the character of the light reflected from the surface of the paper, and shows how the character of this reflection is related to the finish of the paper. It describes briefly the theory and construction of the Glarimeter, by means of which the finish of paper may be measured, and gives and discusses some results obtained by means of this instrument. It shows the degree of agreement that may be expected between different Glarimeters and between different individuals in the determination of finish of paper. The method of calibrating the Glarimeter, and the procedure to be followed in measuring the finish of papers and in reporting results, are given.

There is appended a bibliography of literature relating to the determination of gloss.

Bibliography

R. L. Ingersoll: The Glarimeter—An Instrument for Measuring the Gloss of Paper.—Jour. Op. Soc. Amer., May, 1921.

R. L. Ingersoll: An Improved Form of Glarimeter—Paper 27: 23: (February 9, 1921), p. 18.

R. L. Ingersoll: A Means to Measure the Glaze of Paper.—Electrical World, 63; p. 645 (March 21, 1914).

R. L. Ingersoll: The Determination of Glare.—Electrical World, 64; p. 35.

R. L. Ingersoll: An Improved Form of Pickering Polarimeter for Gloss Measurements (by the Polarization Method).—A paper presented before the Fifth Meeting (Dec. 27-29, 1920) of the Optical Society of America (at the University of Chicago).

P. G. Nutting: Determination of Glare.—Electrical World, 63: p. 1156 (May 23, 1914).

P. G. Nutting: Mixed Specular and Diffuse Reflection.—Trans. Illum. Eng. Soc., 1915.

P. G. Nutting and L. A. Jones: Tests of Some Possible Reflecting Power Standards.—Trans. Illum. Eng. Soc., 1915.

L. A. Jones: Gloss Characteristics of Photographic Papers.—Jour. Op. Soc. Am. March, 1922.

Karl Keiser: How to Measure the Gloss of Photographic Paper.—Paper, May 26, 1920, p. 16.

Measuring Gloss of Photographic Papers.—Paper, 32:17 (August 15, 1923), p. 18.

Central Scientific Company: The Ingersoll Glarimeter. Bulletin No. 100, (May 1, 1923).

Technical Association of the Pulp and Paper Ind.: Paper Testing Methods, 1924 edition.

For a description of the Pickering Polarimeter, see Proc. Am. Acad. Arts and Sci., IX, 1 (1873); also XXI, 294 (1885).

REPORT OF COMMITTEE ON COATED AND PROCESSED PAPERS

By E. Sutermeister, Chairman

During the past year, which, because of the change in the date of the annual meeting, has allowed us only ten working months, the Committee on Coated and Processed Papers has prepared three papers which will be presented in abstract and discussed in the sectional meeting. These papers are:

"Notes on China Clay" by Donald V. Lowe, Ridgefield, N. J.

"The Action of Acetic Acid on Animal Glue," by G. W. Sullivan, Holyoke, Mass.

"Baryta Papers" by Dr. Th. Bentzen, Stevens Point, Wis.

The first paper is on a subject which interests practically all paper coaters and it offers a number of interesting points for discussion. The second is valuable to anyone using glue, especially in the making of gummed tape, while the third is one which opens up an entirely new field, so far as the meetings of the Technical Association are concerned, and it is hoped that a good discussion can be brought out.

Members Have Not Made Good

Your chairman is much disappointed at not being able to present more papers. When the committee was made up after the last annual meeting, it appeared that there would be no difficulty in obtaining several good papers. Members who promised papers have not made good, up to the time of writing this report. Probably they have most excellent reasons for this failure, but if so they are unknown to your chairman as he has not been favored with any explanation.

As one of these papers was promised for last year also it appears that it is almost hopeless to expect it to be delivered.

The failure of these members is all the more unfortunate as an offer to prepare a paper relating to machinery, processes and flow charts for plain waxed and carbonized papers was rejected because it was feared that the program would be too crowded if it were included. It is possible that the member who made this offer can be persuaded to prepare the paper for next year.

In 1923 your committee attempted to arouse the interest of the waxed paper manufacturers to the extent that co-operative work might be undertaken, but it proved to be impossible at that time. Recently the American Waxed Paper Association has been revived and it is possible that some arrangement can be made to carry on work which may be of interest to both Associations. It is recommended that attempts along this line be made during the coming year.

A few months ago the Association of Gummed Tape Manufacturers was approached to see if cooperative work on some of their problems could be started. Word has just been received that this question will be taken up in their meeting in Chicago on January, 28th.

The past year has brought out the fact that a number of members who expressed interest in the work of this Committee had axes to grind. It became evident that they wished to obtain all possible information along certain lines but not divulge any, for when they were asked to prepare papers they immediately lost interest. While it is the desire of the Committee to be of as much service as possible to the industries represented it is felt that attention should be paid first to those branches and members who are willing to give as well as receive.

EFFECT OF THE CLAMPING DEVICE OF THE MULLEN PAPER TESTER ON TEST RESULTS

By Leo W. Snyder *

In the use of the Mullen paper tester, there has been noted a creeping of the paper under test which necessarily causes variable results. The creeping seems to be due to faulty design of the gripping surface rather than to insufficient clamping pressure. In order to determine this point and find how this defect may be remedied, a study was made of different kinds of clamping surfaces.

Gripping Surface in Present Clamp

In the present style of clamp the gripping surface consists of a ruber washer. It is commonly known that owing to the change in the resiliency of the rubber washers with age and possible deterioration in other respects, care must be taken to replace them at regular intervals in order to obtain consistent results. A comparative test of a clamp equipped with a new rubber washer on one equipped with an old washer showed differences in test results of different papers running as high as 8 per cent. The old rubber washer gave lower results in all cases. It was noted that there was considerably more creepage with the new washer than the old one, this probably being the main cause of the difference found. It is apparent, therefore, that the rubber washer style of clamp may cause considerable error and that more consistent and more reliable results may be expected with the elimination of the washer.

To find the effect of the elimination of the rubber washer, a study was made of three different styles of all-metal clamps as compared with the rubber washer type. The all-metal clamps had different kinds of bearing surfaces, one having concentric grooves and the others having surfaces machined to different degrees of smoothness. The rubber washer type was equipped with a new washer. Comparative tests were made of several paper samples having a range of from 14 to 160 points bursting strength.

The results show that the all-metal clamps permitted less creeping than the rubber washer type. There was more creeping with the grooved all-metal clamp than with the machined surface clamps, the smoother surface clamp giving the best results. It would seem that two plane surfaces, only slightly roughed would probably give the most satisfactory results. Further experimentation will be necessary to find the conditions necessary to entirely eliminate creeping of the paper under test.

Comparative Values

As regards the comparative values of the test results obtained with the different styles of clamps, the metal clamps gave consistently lower results than the rubber washer type. The higher results obtained with the later were apparently in proportion to the amount of creepage observed. The difference in test results between the rubber washer type and the all-metal type amounted to from 5 to 15 per cent, varying with the weight and kind of paper tested.

This difference will need to be considered if a change in the clamping device is made.

* Junior Engineer, and Stanley Henderson, Laboratory Aid, Bureau of Standards.

BIBLIOGRAPHY OF PAPERMAKING FOR 1924

TAPPI Committee on Abstracts and Bibliography, Contribution No. 45

By Clarence Jay West, Chairman, and A. Papineau-Couture

In general, the same method of classification has been used in the following bibliography as was used in that for 1922 and 1923. Because the abstracts published by the Technical Association throw light upon many of the articles listed below, it has been deemed advisable to include references to these wherever possible. These abstracts are quoted from the Technical Section (T. S.), the paging of which is used, rather than from the individual issues of the PAPER TRADE JOURNAL. For the same reason, many references are included to Chemical Abstracts, designated as "C. A."

Index of Topics

For convenience in locating a given article, the following index of topics is given. The various headings are arranged alphabetically in the bibliography, with the exception that a few miscellaneous articles, which do not properly belong under any of the regular headings, are grouped at the end.

Acidity
Adhesives
Bagasse
Bamboo
Barking
Bearings
Beating
Belting
Bibliography
Black Liquors
Bleaching
  Tests
Blotting Paper
Boards
Books—General
Building Materials
Calenders
Cellulose
  Analytical
Centrifugals
Chlorine Process
Clays
Coated Papers
Colloids
Corrosion
Costs
Cotton Stalks
Dandy Roll
Definitions
Digesters
Directories
Drying of Paper
Dyes and Dyeing of Paper
Education and Research
Electric Boilers
Electricity in Papermaking
Esparto
Evaporators
Felts
Fillers
Flowmeters
Fuels
Groundwood
Heat Economy
History
Hygiene
Kollergangs
Kraft Papers
Laboratories
Lighting
Lignin
Lubrication
Machinery
Materials Testing
Mechanical Handling
Mechanical Pulp
  General
  Decay
  Machinery
Paper—General
Paper Analysis and Testing
  General
  Color
  Electrical Properties
  Fiber Composition
  Humidity and Paper Testing
  Mechanical Pulp
  Porosity
  Strength
  Surface
  Transparency
  Waterproof Papers
Paper Specialties
Parchment Paper
Photographic Papers
Pitch
Power
Press Rolls
Pulps—Testing
Pulp Thickeners
Pulp Wood
Pumps
Rags
Raw Materials
  General
  Woods
  Other Fibers
Recording Instruments
Reeds
Rubber in Papermaking
Savealls
Saws
Sizing
Specifications
Statistics
Straw Pulp and Paper
Stream Pollution
Suction Rolls
Sulphate Process
  By-products
Sulphite Process
  Acid Manufacture
  Manufacturing Processes
  Reddening of Pulp
  Waste Liquors
Tanks
Trade
Ventilation
Washing
Waste
Waste Paper
Water
Watermarks
Waterproofing
Wires
Woodroom
Miscellaneous

Acidity

Minor, Jessie E.

Acidity and papermaking.
Paper 33, No. 24, 6-8 (Apr. 3, 1924); T. S. 79, 172; C. A. 18, 1569.

Adhesives

Gottschalk, V. H.

The use of glue for coated paper.
Paper Trade J. 79, No. 20, 46-49 (Nov. 13, 1924).

Kirchoff, Peter.

Notes on the Lorenz method for determination of adhesive colloids in glue.
Papierfabr. 21, 529-530 (Dec. 23, 1923); T. S. 79, 37.

Silicate of soda in paper manufacture.
Paper Making 43, 646-647 (Dec., 1924).

Stericker, Wm.

Silicate of soda in the paper industry.
Paper Mill 48, No. 1, 10, 12, 48 (Jan. 5, 1924).

Wislicenus, H., and **Lorenz, Rud.**

Colloid chemical determination of the value of adhesives.
Kolloid-Z. 34, 201 (1924); Papierfabr. 22, No. 30, 337-338 (July 27, 1924).

Bagasse

Kumagawa, Hachiro, and **Shimomura, Kenkichi.**

Chemical composition and ease of digestion of bagasse and rice straw.
Z. angew. Chem. 36, 414-418 (1923); Papierfabr. 22, No. 2, 13-17; No. 3, 21-23 (Jan. 13, 20, 1924).

Mason, C. W.

Manufacture of paper from bagasse.
Paper 34, No. 6, 240 (May 29, 1924); World's Paper Trade Rev. 82, No. 1, 72 (July 4, 1924); Paper Making 43, 485 (Sept., 1924); C. A. 18, 2808; T. S. 79, 189.

Bamboo

Baker, R. St. Barbe.

Papers from Kenya bamboo.
Paper Making 43, No. 5, 289-291 (May, 1924); T. S. 79, 123.

Fang, H. C.

A study of the raw materials for bamboo paper.
Science (China), 8, 372-390 (1923); C. A. 18, 1389.

Mason, C. W.

Possibilities of pulp manufacture.
Paper 34, No. 6, 248 (May 29, 1924); C. A. 18, 2,602; T. S. 79, 189.

Pearson and Raitt.

Position of the paper industry in India. Bamboo as a papermaking material.
World's Paper Trade Rev. 82, No. 9, 652, 654 (Aug. 29, 1924); Paper 34, No. 22, 999 (Sept. 18, 1924); Pulp Paper Mag. Can. 22, No. 38, 962-963 (Sept. 18, 1924); Paper Maker 68, 537-538 (Nov., 1924); T. S. 80, 1; C. A. 18, 3716. *See also* World's Paper Trade Rev. 82, No. 20, 1670, 1672 (Nov. 14, 1924); Paper Mill 48, No. 52, 18 (Dec. 27, 1924); Paper 35, No. 8, 334 (Dec. 11, 1924).

Tempany, H. A.

Use of bamboo for paper manufacture.
Rev. Agr. Maurice, 1923, 310-313; T. S. 79, 189; C. A. 18, 1905.

Barking

Bezner, Albert.

Hand and machine barking.
Wochbl. Papierfabr. 55, No. 22, 1343-1344 (May 31, 1924); T. S. 79, 236.

Fay, H.

Hand or machine barking
Wochbl. Papierfabr. 55, No. 14, 788 (Apr. 5, 1924); T. S. 79, 156, *See also* Wochbl. Papierfabr. 55, No. 27, 1679-1680; (July 5, 1924).

Herold, M.

Hand or machine barking.
Wochbl. Papierfabr. 55, No. 21, 1275-1276 (May 24, 1924); T. S. 79, 236.
See also Wood Room.

Bearings

Application of ball bearings to table rolls.

Mon. Papeterie Française 55, 61-62 (Feb. 1, 1924).

Andrews, E.

Babbitt metals and how to babbitt bearings.
Paper Trade J. 78, No. 10, 57-58 (Mar. 6, 1924); T. S. 79, 115.

Batesole, D. E.

Hoffman roller bearings in papermaking machinery.
Paper Trade J. 78, No. 15, 201 (Apr. 10, 1924); Paper Mill 48, No. 15, 86, 88 (Apr. 12, 1924); T. S. 79, 148; Tech. Assoc. Papers 7, 86 (1924).

Can Losses of energy be reduced to a minimum?

Papeterie 46, 68-73 (Jan. 25, 1924); T. S. 79, 86.

RBF ball bearings.

Papier 27, 55-59 (Jan., 1924); T. S. 79, 86.

Sherwood, C. F.

Cutless bearings in the paper industry.
Paper Ind. 6, No. 2, 363, 365, 367 (May, 1924); Paper Mill 48, No. 21, 34, 36, 48 (May 24, 1924); Paper 34, No. 13, 565-567 (July 17, 1924); T. S. 79, 148.

Spencer, G. H.

Most efficient type of bearing for paper machinery.
Paper Trade J. 78, No. 15, 209, 211, 213, 215, 217 (Apr. 10, 1924); Tech. Assoc. Papers 7, 101-105 (1924); Paper Mill 48, No. 15, 65-66, 68, 70, 72 (Apr. 12, 1924); World's Paper Trade Rev. 81, No. 9, 1526, 1528 (May 9, 1924); T. S. 79, 148.

TECHNICAL SECTION, PAGE 60

Spencer, G. H.

Anti-friction bearings on high speed newsprint machines.
Paper Trade J. 78, No. 22, 46-49 (May 29, 1924); Paper Mill 48, No. 23, 16, 18, 38 (June 7, 1924); Pulp Paper Mag. Can. 22, No. 22; 585-587 (June 5, 1924); T. S. 79, 148.

Beating

Brassington, J. W.

Washing stock and beating pulp for paper.
Paper 34, No. 19, 845-847 (Aug. 28, 1924); C. A. 18, 3717.

Brassington, J. W.

New ideas on beating.
Paper 34, No. 11, 461-464 (July 3, 1924).

Dimanche, A. D.

Beater room notes.
Paper Ind. 6, 501 (June, 1924); T. S. 80, 1.

Fast. A.

Beater theories.
Bumazhnaia Promyshlenost (Russia) 2, No. 1, 45-58 (Jan., Feb., 1923); T. S. 79, 36; C. A. 18, 903.

Fast, A.

Testing the beating theories of Sigurd Smith.
Bumazhnaia Promyshlenost (Russia) 2, Nos. 2-3, 163-186 (1923); C. A. 18, 1198; T. S. 79, 36.

Fishburn, V. E.

Lap stock vs. slush stock in furnishing beaters.
Paper Mill 48, No. 43, 43-44 (Oct. 25, 1924).

Fues, Ernst.

Acceleration of mucilage formation in the beater.
Papierfabr. 22, No. 11, 106 (Mar. 16, 1924); T. S. 79, 172.

Green, A. B.

Simplicity in research (the Green "Beater Drag").
Paper 33, No. 26, 6-10 (Apr. 10, 1924); C. A. 18, 1567; T. S. 79, 172.

Griffin, M. L.

Washing pulp and beating stock for paper.
Paper Mill 48, No. 32, 16, 38 (Aug. 9, 1924); C. A. 18, 3272; Making Paper 7, No. 6, 164-166 (Dec., 1924).

Guild, E. J., and Mills, S.

A few notes on the Schopper-Riegler beating test.
Paper Maker 67, No. 4, 415-416; No. 5, 511-513 (Apr., May, 1924); Proc. Tech. Sect., Paper Makers' Assoc. of Gt. Brit. and Ireland 5, pt. 1, 63-73 (Sept., 1924); World's Paper Trade Rev. 81, No. 11, 832, 834, 836, 840, 842, 894; No. 12, 914, 916, 918, 920, 922 (Mar. 14, 21, 1924); No. 18, 1410, 1412, 1414, 1416 (May 21, 1924), Paper Makers' Mo. J. 62, 159-164 (1924); C. A. 18, 2076.

Jacobsen, Hoffmann.

A new method for the rapid determination of beating in the hollander.
Papierfabr. 22, No. 24, 265-270 (June 15, 1924).

Jenkins, F.

What happens in the beater room.
World's Paper Trade Rev. 81, No. 7, 570-576; No. 10, 800 (Feb. 15, Mar. 7, 1924); Paper Maker 67, No. 3, 291-294 (Mar., 1924); Paper Mill 48, No. 13, 12; No. 14; 12, 34 (Mar. 29, Apr. 3, 1924); Proc. Tech. Sec., Papermakers' Assoc. of Gt. Brit. and Ireland 5, pt. 1, 50-62 (Sept., 1924); C. A. 18, 1570, 3717; T. S. 79, 139.

Jenkins, F.

Beating problems.
World's Paper Trade Rev. 80, 1552-1558, 1586-1588 (Nov. 9, 1923); T. S. 79, 139; C. A. 18, 1570.

Knobel, J. B.

A new beating method.
Papir Journalen 12, No. 16, 164-167 (Oct. 18, 1924).

Klemm, Paul.

Paper texture and the manufacturing process.
Wochbl. Papierfabr. 55, No. 2, 62-64 (Jan. 12, 1924); C. A. 18, 1050; T. S. 79, 36.

Letters of a paper maker to his son.

Wochbl. Papierfabr. 55, 718-720, 850-852, 1127-1130 (Mar. 29, Apr. 19, May 10, 1924).

McBain, B. T.

The Youngchild beater.
Paper 34, No. 10, 426 (June 26, 1924).

McNeill, D.

Beating.
Proc. Tech. Sect., Papermakers' Assoc. of Gt. Brit. and Ireland, 4, pt. 2, 138-154 (1924); C. A. 18, 1906.

Nash, Wm.

Hydration and beating.
Paper Ind. 5, No. 11, 1715 (Feb., 1924); Paper Maker 67, No. 5, 517 (May, 1924).

New hollander (Crabtree).

Papierfabr. 22, No. 6, 46-47 (Feb. 10, 1924).

Paul, F.

Power economy in the beating of certain grades of paper and in the manufacture of paper in general.
Papier 27, 1131-1146 (Oct., 1924).

Schwalbe, C. G.

The acceleration of mucilage formation in the beater by chemical means and by adding mucilage-forming substances.
Papierfabr. 22, No. 1, 1-5 (Jan. 6, 1924); Paper Trade J. 80, No. 4, 46-48 (Jan. 22, 1925); World's Paper Trade Rev. 81, No. 8, 628, 630 (Feb. 22, 1924); No. 16, 1256 (Apr. 18, 1924); Paper 33, No. 22, 11 (Mar. 20, 1924); Papierfabr. 22, No. 9, 77 (Mar. 2, 1924); T. S. 79, 36, 172; C. A. 18, 1050, 1748, 2602.

Shartle, Chas. W.

Beater for box board stock.
Paper 34, No. 7, 291-292 (June 5, 1924).

Shartle, C. W.

The beater of today.
Paper Trade J. 78, No. 21, 48-49 (May 22, 1924); Paper Ind. 6, No. 6, 1069, 1071 (Sept., 1924); T. S. 79, 140; Paper Mill 48, No. 21, 12, 72 (May 24, 1924).

Silesius.

The economics of the new types of hollanders.
Wochbl. Papierfabr. 55, No. 24A, 35-48 (June 14, 1924).

Smith, Sigurd.

The action of the beater in paper making.
Paper Maker, Intern. No., 1922-1923, 99-104.

Summers, Bertrand S.

Papermaking fibers.
Paper 34, No. 6, 244-246 (May 29, 1924).
See also **Centrifugals, Pulp Testing.**

Belting

Arny, Louis W.

Making leather belts endless.
Paper Trade J. 79, No. 10, 43-47 (Sept. 4, 1924).

Belting.

Wochbl. Papierfabr.; Paper Making 43, No. 5, 286, 288-289 (May, 1924).

Jones, R. F.

Belt creep and its effects on the application of the fundamental belting formula.
Paper Mill 48, No. 36, 26, 30 (Sept. 6, 1924).

Principle of the Pulmax drive.

Paper Mill 48, No. 9, 14, 16 (Mar. 1, 1924).

Rhoads, J. E.

Power transmission by belting.
Paper 33, No. 21, 11-12 (Mar. 13, 1924); Paper Ind. 5, No. 12, 1937, 1939 (Mar., 1924); Making Paper 7, No. 2; 39-41 (Aug., 1924); T. S. 79, 148.

Sahmel, Vigo

Short center belt drive.
Paper 33, No. 26, 146, 148 (Apr. 17, 1924); Paper Trade J. 78, No. 19, 61-64 (May 8, 1924); T. S. 79, 148.

Schaphorst, Wm. F.

A new belt drive.
Paper Trade J. 79, No. 6; 51-53 (Aug. 7, 1924).

Streeter, Claude O.

Installation and care of belting.
Paper 34, No. 3, 90-91 (May 8, 1924).

Bibliography

Graap, —.

Abstracts of pulp and paper literature.
Zellstoff u. Papier 4, 4-7, 92-97, 201-204, 240-242, 293-296 (1924). Covers both chemical and mechanical, from July, 1923, to Sept., 1924.

Grunewald, Willy.

Abstracts of the pulp and paper literature.
Zellstoff u. Papier 4, 38-41 (Mar., 1924). Covers mechanical papermaking literature for Oct. to Dec., 1923.

West, C. J.

Report of the Committee on Abstracts and Bibiography.
Paper Trade J. 78, No. 15, 159 (Apr. 10, 1924); Tech. Assoc. Papers 7, 59 (1924); Pulp Paper Mag. Can. 22, No. 15, 405-406 (Apr. 10, 1924); Paper Mill 48, No. 15, 88 (Apr. 12, 1924); Paper 33, No. 26, 106 (Apr. 17, 1924); Paper Ind. 6, No. 1, 112; (Apr., 1924).

West, C. J.

Chlorine in the manufacture of paper pulp.
Paper Trade J. 79, No. 14, 43-44 (Oct. 2, 1924); Pulp Paper Mag. Can. 22, No. 42, 1071 (Oct. 16, 1924); C. A. 18, 3716.

West, C. J.

Rubber latex in paper manufacture.
Paper Trade J. 79, No. 7, 41-42 (Aug. 14, 1924); C. A. 18, 3272.

West, Clarence J., and Papineau-Couture, A.

Bibliography of paper making for 1923.
Paper Trade J. 78, No. 17, 52-54; No. 18, 49-54; No. 19, 53-56; No. 20, 49-52; No. 21, 45-47; No. 22, 51-52; No. 23, 55-57; No. 24, 45-46; No. 25, 41-43 (Apr. 24-June 19, 1924). Tech. Assoc. Papers 7, 106-132 (1924).

Black Liquor

See Sulphate Process—Waste Liquors.

Bleaching

Bell, J. H.

Effect of physical conditions on the rate of bleaching of paper pulp.

Paper Maker 67, No. 5, 542 (May, 1924); discussion, 542-545; Proc. Tech. Sect., Papermakers' Assoc. of Gt. Brit. and Ireland 5, pt. 1, 24-42 (Sept., 1924); World's Paper Trade Rev. 81, No. 13; 1000 (Mar. 28, 1924); No. 15, 1164, 1166, 1168, 1170, 1172 (Apr. 11, 1924); C. A. 18, 3716.

Bleach solution prepared from liquid anhydrous chlorine.

Papierfabr. 22, No. 7, 53-55 (Feb. 17, 1924).

Curran, C. E., and **Baird, P. K.**

Bleaching of wood pulp. I. Factors affecting process and their control.

Paper Trade J. 79, No. 1, 56-58 (July 3, 1924); T. S. 79, 209; C. A. 18, 2806; Tech. Assoc. Papers, 7, 63-65 (1924)

Curran, C. E., and **Baird, P. K.**

Bleaching of wood pulp. II. Effect of hardness of water.

Paper Trade J. 79, No. 3, 41-43 (July 17, 1924); C. A. 18, 2806. Tech. Assoc. Papers 7, 65-68 (1924).

Curran, C. E., and **Baird, P. K.**

Bleaching of wood pulp. III. The effect of temperature on the bleaching of sulphite pulp.

Paper Trade J. 79, No. 11, 45-47 (Sept. 11, 1924); C. A. 18, 3717.

Fournier, Raymond.

Notes on bleaching.

Papeterie, Special No., 49-62 (Dec., 1923-Jan., 1924); T. S. 79, 138; C. A., 18, 1907.

Kauffmann, H.

Bleach liquor and the bleaching process.

Z. angew. Chem. 37, 364 (1924).

Letters of a paper maker to his son (Bleaching).

Wochbl. Papierfabr. 55, 397-400, 582-584 (Feb. 23, Mar. 15, 1924); T. S. 79, 139.

MacDonald, J. L. A.

Bleaching problems.

World's Paper Trade Rev. 81, 996-998, 1164-1174 (Mar. 28, Apr. 11, 1924); Paper Makers' Mo. J. 62; 157-158 (Apr. 15, 1924); Paper Maker 67, No. 5, 541-542 (May, 1924); Proc. Tech. Sect., Papermakers' Assoc. Gt. Brit. and Ireland, 5, pt. 1, 6-23 (Sept., 1924); T. S. 79, 138; C. A. 18, 2076.

MacMahon, J. H.

Bleach liquors from liquid chlorine.

Paper 33, No. 25, 13-16 (Apr. 10, 1924); Paper Mill 48, No. 33, 12, 14 (Aug. 16, 1924); T. S. 79, 138.

Mathieson process.

Wochbl. Papierfabr. 55, No. 11, 588 (Mar. 15, 1924).

Müller, Max

Pulp bleaching plant.

Wochbl. Papierfabr. 55, No. 24A, 31-35 (June 14, 1924).

Reidrew.

Bleaching powder.

Papier 27, 189-193 (Feb., 1924); T. S. 79, 138; C. A. 18, 1734.

Schinkel, Georg.

Bleaching.

Wochbl. Papierfabr. 55, No. 24A, 51-53 (June 14, 1924).

TECHNICAL SECTION, PAGE 62

Sutermeister, E.

Bleaching of papermaking fibers.

Am. Dyestuff Rept. 13, 185-188, 216-218 (1924); Paper Making 43, 262, 265, 327-329 (May, June, 1924); C. A. 18, 1749.

Waentig, F.

Bleaching process.

Z. angew. Chem. 37, 97 (1924); T. S. 79, 138.

Use of liquid chlorine in the paper industry.

L'Industria della carta 27, 159 (1924).

Weyl, August, and **Nissen, Theodor.**

Electrolytic alkali chlorine installations of the pulp and paper industries.

Siemens Z. 3, 407-409 (1923); C. A. 18, 201; T. S. 79, 37.

Bleaching—Tests

Cadigan, A. M.

Controlling the bleaching of sulphite pulp.

Paper Trade J. 78, No. 16, 39 (Apr. 17, 1924); Tech. Assoc. Papers 7, 13 (1924); Paper 34, No. 2, 37 (May 1, 1924); World's Paper Trade Rev. 81, No. 26, 2148 (June 27, 1924); C. A. 18, 1905; T. S. 79, 138.

Kleinstruck, M., and **Koch, A.**

Recovery of iodine from titration residues.

Zellstoff u. Papier 3, 261 (Dec. 1923); T. S. 78, 261.

Kertesz, Zoltan.

Determination of available chlorine in bleaching powder by means of nitrite solutions.

Z. angew. Chem. 36, 595-596 (Dec. 10, 1923); Papierfabr. 22, No. 4, 29-30 (Jan. 27, 1924); Wochbl. Papierfabr. 55, No. 4, 158-160 (Jan. 26, 1924); T. S. 79, 96; World's Paper Trade Rev. 81, No. 10, 766 (Mar. 7, 1924).

Noll, A.

Chloramine as a substitute for iodine in the paper industry.

Papierfabr. 22, No. 34, 385-387 (Aug. 24, 1924); Zellstoff u. Papier 4, No. 9, 218-219 (Sept., 1924); C. A. 19, 176; T. S. 80, 41.

Ristenpart, E.

Methylene blue number as an indicator of over bleaching.

Cellulosechemie 5, No. 1, 8 (Jan. 27, 1924); T. S. 79, 97; C. A. 18, 3112.

Roe, Ralph B.

Determination of the chlorine absorbed by unbleached sulphite pulp.

Ind. Eng. Chem. 16, 808-811 (1924); Paper Trade J. 79, No. 15, 43-46 (Oct. 9, 1924); Papierfabr. 22, No. 50, 589-593 (Dec. 14, 1924); World's Paper Trade Rev. 82, No. 16, 1320, 1322 (Oct. 17, 1924); C. A. 18, 2808; T. S. 80, 42.

Blotting Papers

Absorbent papers.

Papierfabr. 22, 306-307 (1924); C. A. 18, 2961.

Dalen, G.

The testing of blotting paper by its surface.

Mitt Materialprüfungsamt 40, 238-244 (1922); C. A. 18, 1197.

Herzberg, W.

Testing of blotting paper.

Wochbl. Papierfabr. 55, 1418 (June 7, 1924); Zellstoff u. Papier 4, 119 (June, 1924); Papierfabr. 22, 120g (June 17, 1924); C. A. 18, 962; T. S. 79, 219.

(To be continued)

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

DISCUSSION OF RAW MATERIALS

The following is a report in part of the discussion on raw materials which took place at the convention of the Cost Association of the Paper Industry at the Commodore Hotel, New York, December 10 to 12, 1925:—

I take great pleasure in introducing Miss Kiely to the audience. (Applause.)

MISS HELEN KIELY: I have many apologies to offer; one is that I am not a speaker in any sense of the word. Being a chemist sort of eliminates one from being a speaker, and I am certainly not a cost man—or cost woman. I have always avoided figures if I didn't have a slide rule or somebody to figure for me, and I doubt very much if I can tell you anything about the costs at all.

When Mr. Burke asked me to write this up, I told him I wasn't the one to do it, but he seemed to think I was, so I have put forth a very humble effort in the paper I have here. I am glad it is in print, so you won't have to listen to me talk any longer than I can possibly make it in.[1]

I have divided this paper into the treatment of rags, wood pulp, old paper, and process supplies, and what I have tried to do is to give you some way of figuring your cost equivalents. It seems to me that the cost man should be a manufacturing man, he should be a chemist, besides being an accountant. I think you cost men have the biggest job in the paper industry, because you have to know everybody's business in order to be able to determine your own.

I am quite sure it is much easier to be on the technical end. All we have to do is pass the information on to you people, and you have to figure it out and make up your statements and cost estimates accordingly.

In the treatment of rags, I think I have outlined it here very much the way Mr. Astley has. There is only one thing I noticed; he said they determined the weight after the final dusting. I understood from that it was before the rags go into the rotary boilers, is that correct?

MR. ASTLEY: We do not determine the weight previous to their going into the boiler, or after. We determine the weight of the cutter dust, but we do not determine the weight of the material itself, either before or after it goes into the boiler.

MISS KIELY: That is the way we have figured. We have always figured the amount of dust that is lost after cutting and sorting is very negligible, especially on a high grade of rags. There is some dust going through the cutters that is lost, but I think if you figure dressed weights from the sorted rags, that they will take care of your visible weight up to that point.

MR. ASTLEY: I think that particular grades of rags do show a representative quantity of dust; such things as jute and bagging, particularly.

MISS KIELY: I noticed that; I wasn't sure whether everybody put an extra scale there before the rags go into the rotary boilers. There is a chance for saving there. The boilers are supposed to hold 9,000 or 10,000 pounds, and the amount of alkali the man puts in is based on the dressed weight of rags. If you are going to make a short bleach, he may put in 8,000 or 9,000 lbs., whereas last week he put in 10,000. Nine times out of ten he will put in the same amount of alkali as for 10,000 lbs. You have a loss there that could be saved if there was a scale, a hopper scale or something that would pass the rags over the scales before they drop into the rotary. I have thought some of that, and I am going to look that up. If I had had more time I would have looked it up, and if the cost of that extra weight could be saved in the amount of chemicals, that could be checked before it went into the bleach boiler. I don't know whether anybody is doing that or not, but I'd like to hear something on that.

Now as to the invisible wastages from the time the rags go into the rotary boiler until you put them into the beater. Some say you might take the weight of the rags and shrinkage through the rotary. There is quite a little objection to that in that the moisture content coming from the rotary would vary, and I think the amount of chemicals retained in the stock before washing would compensate for any loss that would be sustained going through the duster. I think the safest way is to take the invisible shrinkage from the drainer stock. The only way that can be done is by getting the car equivalent. After the rag stock has been taken through the washers and put into the drainers, the bleach tag is put on it, and it is wise, if you can, to get them to put one bleach into one drainer, and then you have a better chance to keep a proper check. Not more than two bleaches should be put into one drainer if you want to get any kind of shrinage results. You determine the amount of moisture and the car equivalent in pounds of dry weight.

In my paper[2] you will find some figures showing the variation in the stock cars. In the last column they vary from 125 up to 290 pounds. I had these taken last week and they represent four different kinds of rags. They were all dug out during the day time, three or four men digging from the drainers, and the average, I think, was 186 pounds. That means that each car of drainer stock should be corrected to 186 pounds weight. But if we had ob-

[1] This paper was printed in the Cost Section of the PAPER TRADE JOURNAL of January 8, 1925.

[2] Cost Section, PAPER TRADE JOURNAL, January 8, 1925.

tained that car equivalent by taking the average of five cars instead of 25, we might well have got an average figure of 150 or 175 or even 225, and to my mind, that is where the biggest losses come in, viz., in the drainer shrinkage, through not determining the car equivalent accurately enough and often enough over a number of cars. I think we should insist on getting a new car equivalent every three months. When I looked this up, I found ours varied only about 25 pounds between the last two tests we made.

Yesterday morning I got a report from two more; I was in hopes I'd get a bigger variety to give you, and did find a variation of 85 pounds in one division. That meant that on every car they were figuring they were losing 85 pounds of rags, (and that figures up to a good many thousand pounds of rags in a day) which were not being accounted for. That is the biggest thing for you, to have your car equivalent right. If you don't start right there, I think nine-tenths of the other work is lost, because the visible waste you get is very, very small in comparison to this invisible waste. We have tried every other way, by getting microscopic tests on the beater, and that will show it within 10 per cent, but that is too big a loss for the cost man, I guess, to pass up, and it is very impractical to have somebody down there with each beater having microscopic examinations, and if you have three different persons down there, you will get three different results; so really, it doesn't mean much.

I think the only thing to do is to get your car equivalent on an average of 25 cars anyway, representing four, or five, or six different kinds of rags, because you will find that different rags give different weights for the car equivalent. The ideal way would be to have a car equivalent for the whites and blues divided into three—into hard rags, and soft rags, and thirds and blues. They usually have the biggest shrinkage.

As a check on the car equivalent, we have found it works very well to get what we call our laboratory shrinkage on these various different grades of rags. We have our mill man send up about ten pounds of rags to the laboratory. We are equipped to make a regular bleach and carry the rags right through to get the "invisible" waste. We take the ten pounds and charge them into a rotary boiler with the amount of soda ash we use, and cook it under the same pressure they would use in the mill for a certain length of time. We usually use forty pounds pressure for six hours (either 35 or 40).

Of course, there are a good many mills that are not equipped as thoroughly as we are, but I have checked it up in an open boiler, and I found that cooking under pressure doesn't increase the shrinkage to any appreciable degree.

MR. ASTLEY: We use forty pounds pressure; have you at hand the amount of time you give that in the boiler on that pressure?

MISS KIELEY: Yes, six hours. We don't have charts; we have a steam gauge on there, and the man who is doing that checks the time. It usually takes a half to three-quarters of an hour. We have gas to keep it up to temperature. It doesn't take so long to get it in the mill. We can increase the gas, and it doesn't take more than three-quarters of an hour.

Somebody once suggested having a thermometer on the rotary boilers instead of a steam gauge and cooking the rags by a thermometer, not by pressure. Lots of times the pressure wouldn't go down materially on the gauge while the temperature may be lowered a lot. I don't know whether any of the mills here are equipped with those thermometers along with their pressure gauges or not. We tried it out a couple of times in a couple of our mills, and had a great deal of difficulty in getting the thermometers to register anywhere near the required pressure. The thermometer gets caught in the rags, and you get into all kinds of trouble. We didn't give it a very fair trial, but it has been recommended as the ideal way to cook.

We use the exact pressure in the laboratory, and after we have cooked the rags for six hours, we dump them into a washer and wash them for two or three hours, and then put our bleach right into our washer, about 3 per cent bleach on most of our rags, then drop them into the drainer after we have washed the bleach out, and dry them, and determine the shrinkage on that particular grade of rag. I have given you some of those shrinkages in my paper.[8] If I had had more time, I might have gone into this more carefully and given you more of these shrinkages. I think the first ten or fifteen have all been determined within the last six weeks.

You will find your grade of rags changing considerably. I hate to say how long I have been in the paper business—after a certain point you have to keep going back instead of forward, so I will say for the last 3 years or so, and during this period the rags have changed quite a little. You see, I have another thing to contend with that all you men don't; that is one of the disadvantages of being a woman; a woman never likes to tell how old she is. (Laughter.)

QUESTION: Do you have any particular knowledge of a satisfactory method for use in the mills for determining the dryness of half stock at the beaters; so you know, for instance, very close to the exact dry weight of what has been put into the beaters? Otherwise it seems to me the beater will vary 50 and 75 pounds. Not only is it off from a cost standpoint, but also from the sizing of the sheet.

MISS KIELY: The only way that can be done is by making what we call consistency tests, drawing out a certain amount of stock and taking the water out and weighing it and figuring it. We do that in some of our mills. That ought to be done in order to determine it. Is that what you mean?

QUESTION: Some method that would be entirely practical whereby that figure could be obtained in not more than three minutes time, not a process that requires time.

MISS KIELY: I don't know of any such method. They have the centrifuge machine for removing water, but even that will take time to dry out the stock. You have got to put it into an oven.

QUESTION: My understanding of it is the centrifuge machine will give it in probably four minutes, but not bone dry.

MISS KIELY: No, not bone dry; there is still moisture there. It is a question of drawing it out again. You could centrifuge it for a certain length of time and be quite sure the amount of moisture in your stock would be about 40 or 35 per cent and figure it that way; but anything that requires drying takes over an hour anyway. You have got to take that amount of time.

To get back to my laboratory test on shrinkage. From this figure, we get a percentage, even on khaki of 21.2% shrinkage. That would mean if you had a drainer of khaki stock and half stock, and checked up your car equivalent, you could find any discrepancy very quickly. We have been checking up some of these things with mill tests, and we find that this is quite a simple and effective way. When you do get a big discrepancy as in that case where we found we were figuring our car equivalent at 225, when it should have been 310, if the shrinkage figure we were getting on it had been applied, you would find that the rag wasn't shrinking nearly as much as you thought it was.

That is really the only way I know, of checking your rag stock in order to determine the invisible shrinkage, except with the microscope, and I don't think that is very practical.

PRESIDENT REILLY: It has here, "Silesias, 1.35."

MISS KIELY: That should be 13.5; it is a typographical error. The next is the treatment of old papers.

MEMBER: We have rags and paper, everything but rope.

PRESIDENT REILLY: We have run tests and used considerable rope.

MISS KIELY: We get about 45 per cent shrinkage on rope.

MEMBER: We get about 37½.

MISS KIELY: Perhaps we get a little better on some grades. I

[8]Printed in Cost Section of PAPER TRADE JOURNAL January 8, 1925.

was speaking of Manila hemp and jute; those are the two I am most familiar with.

MEMBER: On your jute, are you figuring on clean cuttings, or bagging?

MISS KIELY: Clean cuttings; I wouldn't attempt to tell you on the waste bagging, because I haven't followed that through the mill at all.

MEMBER: Then again, my saying 37½ per cent, I mean from the weight we paid for to the weight we got out in paper.

MISS KIELY: That is what I mean.

MEMBER: Are these shinkages from the beater to the drainer?

MEMBER: We don't figure invisible and visible shrinkages separately; we keep the one quantity. The visible waste is charged right back.

MISS KIELY: I think that is what we ought to do, have just one waste.

MR. ASTLEY: One question on the rags. Have you had any experience in regard to the 40 pound pressure over six hours, the effect it has on a fibre against a graduated scale downward, for instance, down to 20 pounds, in 12 hours?

MISS KIELY: I think you are safer in running it the latter way. The chances are your rags may be overcooked, and overcooking the rags is the thing you want to get away from. When you overcook them, you incorporate all those salts into your fibre, and it makes it hard to wash them out, and requires more bleach to bleach them. I think the ideal way to cook would be to get your pressure up and gradually take it down. Have it ascending, and then take it down; I think you are safer. I doubt very much, if in most of the rags, whether you could detect that difference in the shrinkage of paper, but you are lots safer with your mill man if you attempt to get up to pressure and keep it there, and then turn your steam off, and it is easier to empty it from your drainer, and it would be more simple. That is the way we try to do. Sometimes they forget to turn off the steam, but they don't do that often. You have to have an automatic valve.

MEMBER: It is said that a rotary boiler should be blown off at a certain time.

MISS KIELY: That is the usual practice, I think.

How much caustic are you using in cooking rope stock?

MEMBER: None. No, I will take that back. I am not a chemist. Do you mean putting in soda ash and lime?

MISS KIELY: Yes.

MEMBER: We don't use straight caustic; soda ash and lime.

MISS KIELY: Are there any more questions on rags?

PRESIDENT REILLY: I went into a mill a short time ago and saw a sign up over the valve that the steam should be shut off at two A. M. That is left up to the watchmen in the mills. When I went in the steam hadn't been shut off, but had been going all night. I got hold of the steam engineer and asked him if he wasn't using up considerable steam there. He said, "Why, no. It doesn't make any difference whether this steam valve is on or not. You have got so much in that boiler, and there is pressure enough on the inside to keep any more from going in."

I am not a steam engineer, and I don't know whether to take that as Gospel truth or not. I'd like to have somebody's views on that.

MISS KIELY: He meant the pressure in the boiler wouldn't be raised any; you can only get a certain amount of pressure in there, anyway. I think when they put the pressure in they get so much air in, and there will only be so much pressure in there, but the rags are being cooked all the time the pressure is there. The rags may have been over-cooked; that is the end you are interested in. The pressure should have been shut off, and should have had a descending curve instead of keeping right straight ahead.

PRESIDENT REILLY: This happened to be a case where they had a lot of trouble, and the man didn't get around to it. I was surprised to hear him make that remark. I have taken it up with two or three others since, and I am frank to say other people I have talked with admit that is a fact. They have put flowmeters on those valves and found there was no steam going into that boiler after a certain period.

MISS KIELY: There was no more steam going in, but the pressure was being maintained.

MEMBER: When there is pressure and heat, is cooking going on?

MISS KIELY: Your stock was being cooked longer. There was no more steam going in, but it was just being maintained there. After you get it full, you can't get any more in.

MEMBER: There would be some consumption through the radiation, but it would be very small.

MISS KIELY: In the treatment of old papers—Mr. Astley explained the way it is commonly used. He said, however, he didn't account for any waste except visible waste. Now, all the magazines on the market today have 15 per cent filler, and some have 18, 19, and 20 per cent.

MR. ASTLEY: We do not use magazine stock; we use straight shavings and newspapers.

MISS KIELY: If you use magazine stock you have shrinkage from filler that is washed out in the washers, and there is at least a 25 per cent shrinkage there.

MR. ASTLEY: We have used magazine stock on a few occasions, but put them through the rag room process and recognize that loss.

MISS KIELY: If you are using magazine stock, it is very easy to get your shrinkage there by laboratory tests and by determining the amount of filler in your paper before you start, and applying that right through your works, allowing a 24 or 25 per cent shrinkage. The filler in these various magazines changes year in and year out but little; you will find a difference of only about 1 per cent. They are trying to get more of that filler in, and allow less of it to go off in the waste water.

So I think if you determine a washer shrinkage on your waste paper—I have given the method we use, by taking a sample out of the washer three minutes after you get your washer loaded, and then just before it drops, and figuring that difference, in that way you can get a figure that can be applied all the way through. Then, for checking the amount of filler I have outlined one or two methods. One is by the liquid level gauge in your chest; they are using the pump system on magazine stock and old paper so much. Do you use the pump system?

MR. ASTLEY: No.

MISS KIELY: You are taking it off in the cars just as you do with your rags?

MR. ASTLEY: Yes.

MISS KIELY: Then you have the same there, your car equivalent. But I think in the newer mills the magazine stock is being used by the pump system. They pump it right from their chest into their beaters, and then they have to do it by volume rather than weight. If you have to determine the volume of your chest, there are several nice ways of doing so. One of the boys did it with a barrel. He tried to do it by cubic contents, etc., and found he got very much more accurate results by taking a barrel, and he had it right near a faucet, and he kept filling the barrel and figuring up and got the number of barrels, and got very accurately the cubic contents of the chest. That's a method you wouldn't have to be a chemist to use, and I think it worked very well. If you have the cubic contents of your chest, and you can figure out the number of pounds to the inch of your magazine stock, and let it run 10 inches, you can figure the amount of magazine stock you are charging to furnish to your beaters if you use a pump system. If you use the car system, it is the same problem you have with your rags.

I think the pump system is a little easier, especially if you have the liquid level gauges. I have explained that in my paper.

There isn't very much to say on wood pulp. The question I'd like to ask the Association on wood pulp, is how far they came along with standard units. I know some time ago there was a

great deal of agitation in getting standard units for sizes of rolls and balances, and standard moisture, and they were going to have all the pulp mills send all these in at a certain size and certain moisture content; if you get that across, your pulp situation is very simple; it will be standard all over. I looked up all the literature I had and couldn't find where it had gone to. Mr. Reilly, what became of that?

PRESIDENT REILLY: We interviewed several of the pulp manufacturers, and every one came across very nicely and agreed to make more uniform units where possible.

On dried pulp we are not having any difficulty, neither dry sulphite nor dry soda, but it is on the wet laps where we get into great difficulties. I think without a doubt this is going to work out in the scheme we are going to work on now. I haven't told Miss Kiely this before, but now that she is here I will tell her our plans.

The cost men in the past have been unable to get accurate data or records of material consumed. If you say to the superintendent or any of your superiors, "We want accurate information, otherwise it is foolish to work on the cost," they say, "You can't have it."

So we are taking the position now that if they cannot give us accurate information as to the quantity of stock used, how can they make standard papers? Isn't it essential to know what you put in each and every beater? Isn't it absolutely essential that they follow the same procedure when they re-make those orders? Then if they don't know what is going in they can't make standard papers. If they do know what is going in, and they are putting it in, and give us that information, we will work out the cost. That is where we are working now, along that line, and by having Miss Kiely come in and tell us how important it is to have accurate information, and how it might possibly be obtained by these different tests, and instruments that she mentions. I think if we take it on that basis, from that standpoint, we will get along all right; we have tried for years to interest the superintendents, and they have given us the best they could. Now we go at them and show them they are not using the material they are supposed to use as shown by these car weights. If we go at it from that point, we have a better ground to work on, at least, we can try it.

In our pursuit for better costs, naturally, we will get onto this subject of pulp, and I know that can be worked out. That is one of the things we are working on, and that is why we are going to have Mr. Graff come here and talk to us. We are going to put that subject up to him, because the Brown Company turns out great quantities of wet pulp. I think we are going to reach that stage some day. If they have got to have a known quantity of pulp going into a beater in order to have standard furnishes, give us our dope, and we will work our costs; it is up to them to produce, and we will show them now they are wrong in their furnishes that they are supposed to be using.

MR. ASTLEY: What method at this time do you use in the testing of your pulp? I mean testing it for moisture?

MISS KIELY: We use different methods, the augur method, the strip method, and disc method, and 10 per cent of the shipment is tested for moisture. I think on all dry pulp we are using the disc method as standard procedure. I think the standard is four discs right through. I can't tell you offhand how many discs they take out—according to the standard method the pulp association has brought out. Then after those discs are taken they are put into an airtight can and brought up to the laboratory. We had been doing this in the mill, and it is only within the last six months that we have decided to do it up in the laboratory. The reason we decided to do it up there is because we found the steam in all our various mills was varying, that instead of having a temperature of 212 degrees, they had 180 or 190 degrees.

So we have been catching a good many invoice discrepancies on invoice weights and pulp and moisture content by having the cans brought up to our place. Then we immediately take the weight and dry it out in our oven overnight and get the bone dry weight and put that on our ticket, and call the purchasing department within twenty-four hours after the car has been received.

QUESTION: You haven't had any experience with the Ragnight method of testing pulp?

MR. ASTLEY: That is a German method we ran into a short time ago. I wonder if the method you are using is the method we are using. We have had occasion to refer to this German method of testing pulp. We have that matter before us now.

MISS KIELY: I don't think you will have to abide by any such method. I think the combined association on imported and domestic pulps have agreed on these standard methods of testing pulps, and I think in case of dispute, they decided upon chemists who are eligible for making tests. I am quite sure that method isn't recognized as standard.

MEMBER: I think it is quite common for a customer to mention different kinds of tests, and very frequently the manufacturer has never heard of them. We found the simplest method of combating that is to simply refer the customer to the Bureau of Standards at Washington, D. C., and have them decide whether that is a standard method or not, and we combat it very easily that way. Then, on these pulp methods, in settling bills, we have noticed they will take these standard tests without a quibble and settle an invoice in that way.

MISS KIELY: That is what the Technical Association is trying to do, develop all these methods. Last year we published the methods, and I think if you have a dispute on your process supplies, they have published all the common tests. If you use that method of testing, the customer or seller hasn't a come-back at all, because they are all recognized and adopted by the trade, and if the trade adopts it, you are all right.

SECRETARY BURKE: I might say right here, Mr. MacNaughton, of the Technical Association will be in charge of the session on Friday morning, and he says they have published some articles along these lines, and if any of you would like to get a copy of their publications, a list of them, I am sure he will be pleased to arrange for you to get them. I would suggest you bring that up Friday morning.

MISS KIELY: I think our testing on material we got out last spring would be interesting.

On the question of wood pulp, after you have your moisture determined, your big job is finished. You then only have to get your weight equivalent again, and that is either the weight of the lap on a certain number of laps or the weight of a certain number of rolls, or if you prefer, to express it in inches. I think both methods are equally good, where you express it in so many laps that weigh so much dry weight, or so many inches. It is a matter of convenience, because there is the same error there so that you want to check up often enough to find out that the weight of the lap is the dry weight of the lap, and is constant. For instance, you want to weigh enough laps to get an average weight per lap, and have the moisture on the tag for figuring the dry weight, I don't care whether you are weighing the pulp in or not, you have to get the weight of your shipment anyway, so I don't see why you should have any trouble at all in checking up your amount.

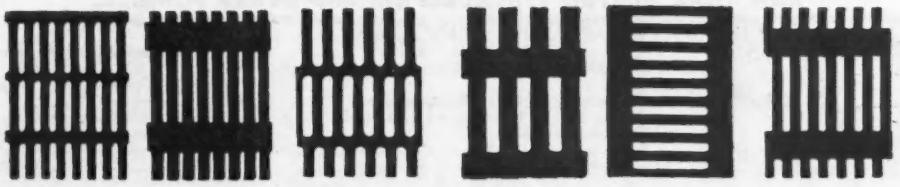
The only thing I thought of in that connection was on most of our beaters, I get the "balance in sulphite." That is rather ambiguous, and you may put in 100 pounds, or 200 pounds. I was wondering if it wouldn't be best to have a standard practice of having a definite amount of sulphite to add to the beater, and weigh that out to one side and make the beater men see to it that all of that sulphite is put in.

It seems to me in getting the cost figures, you might have a bigger loss on rag, and the sulphite might come out on the plus side of your ledger. For that reason, they put in more rags than they think they do, and cut down on the sulphite, because the beater is

(*Continued on page* 68)

PERFORATED METALS

All sizes and shapes of Holes

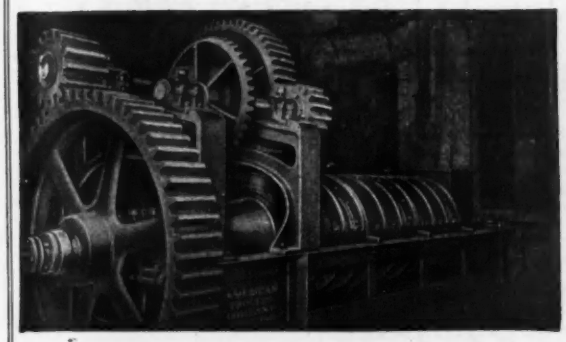


All kinds and thicknesses of Metal

For Centrifugal and Rotary Screens, Drainer Bottoms, Filter Plates, Pulp Washers, etc.

The Harrington & King Perforating Company

5652 Fillmore St., Chicago, Ill., U. S. A. New York Office, 114 Liberty St



AUTOMATIC CONTINUOUS SCREW PRESS

FOR DEWATERING PULP

ADVANTAGES

1. AUTOMATIC—requiring a minimum of labor to operate.
2. CONTINUOUS IN ACTION—hence large saving in power and increase in capacity.
3. ECONOMICAL IN POWER—small power required to operate.
4. HEAVY CONSTRUCTION—hence requiring a minimum of repairs.

AMERICAN PROCESS CO.
68 William Street, New York

Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

Some portion of our clay production is *pulverized.* That part of it which is *pulverized* is, as far as we know, the only *pulverized clay* which is washed and refined before being pulverized.

This insures greater freedom from impurities and an exceedingly uniform product.

Prices on M-E pulverized clay may surprise you even considering this additional treatment.

Let us submit samples and quote you

THE MINER-EDGAR CO.
110 WILLIAM ST.
NEW YORK

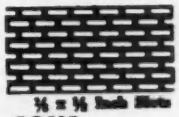
Perforated Metal Screens

For Pulp and Paper Mills

.065 Inch Round

STEEL, COPPER, BRASS, BRONZE and other Alloys

punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.



⅛ x ½ Inch Slots

CHARLES MUNDT & SONS
43-45 FAIRMONT AVE. JERSEY CITY, N. J.

J. ANDERSEN & CO.

21 EAST 40th STREET, NEW YORK CITY

Importers of Chemical Pulps

BLEACHED and UNBLEACHED

Agents for Kellner Partington Paper Pulp Co., Ltd. Sarpsborg, Norway; Forshaga, and Edsvalla, Sweden. Kronstädter Papierstoff—Fabriks Actien—Gesellschaft Mills at Tuciansky, Sv. Martin

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING FEBRUARY 7, 1925

SUMMARY

News print.....937 rolls.
Printing paper.....112 cs., 41 bls., 4 rolls.
Wall paper.....12 bls.
Wrapping paper.....157 bls., 14 cs.
Cigarette paper.....1,363 cs.
Writing paper.....22 cs.
Tissue paper.....13 cs.
Filter paper.....130 cs., 98 bls.
Surface coated paper.....5 cs.
Baryta coated paper.....96 cs.
Paper hangings.....34 bls., 3 cs.
Note paper and envelopes.....6 cs.
Drawing paper.....33 cs.
Packing paper.....277 bls.
Photo paper.....4 cs.
Decalcomania paper.....21 cs.
Designing paper.....18 cs.
Metal coated paper.....5 cs.
Miscellaneous paper..... 41 cs., 129 bls.

CIGARETTE PAPER

American Tobacco Co., Sarcoxie, Bordeaux, 500 cs.
R. J. Reynolds Tobacco Co., Sarcoxie, St. Nazaire, 670 cs.
De Manduit Paper Corp., by same, 144 cs.
Standard Products Corp., Vincent, Havre, 49 cs.

WALL PAPER

F. J. Emmerich & Co., Baltic, Liverpool, 2 bls.
F. J. Emmerich & Co., Thuringia, Hamburg, 5 bls.
F. A. Binder, Geo. Washington, Bremen, 5 bls.

PAPER HANGINGS

W. H. S. Lloyd & Co., American Shipper, London, 34 bls.
W. H. S. Lloyd & Co., by same, 3 cs.

NEWS PRINT

W. Hartman & Co., Andania, Hamburg, 378 rolls.
National City Bank, Stavangerfjord, Oslo, 162 rolls.
Irving Bank-Columbia Trust Co., Thuringia, Hamburg, 397 rolls.

PRINTING PAPER

B. F. Drakenfeld & Co., Samaria, Liverpool, 22 cs.
Berry, Ryer & Co., Assyria, Glasgow., 68 cs.
Bankers Trust Co., Edgehill, Naples, 22 cs.
American Bluefriesveems, Inc., Thuringia, Hamburg, 4 rolls.
J. J. Scott Paper Co., by same, 41 bls.

WRITING PAPER

Distinctive Writing Paper Co., Berengaria, Havre, 4 cs.
Bernard Judae & Co., by same, 2 cs.
Guibout Freres, by same, 4 cs.
Globe Shipping Co., by same, 3 cs.
F. C. Strype, Hellen, Marseilles, 9 cs.

NOTE PAPER AND ENVELOPES

A. Goodman & Co., Samaria, Liverpool, 6 cs.

TISSUE PAPER

F. C. Strype, Samaria, Liverpool, 11 cs.
W. J. Byrnes & Co., Baltic, Liverpool, 2 cs.

DESIGNING PAPER

F. C. Strype, Hellen, Marseilles, 18 cs.

DECALCOMANIA PAPER

C. W. Sellers, Geo. Washington, Bremen, 21 cs.

PHOTO PAPER

J. J. Gavin & Co., Baltic, Liverpool, 4 cs.

DRAWING PAPER

Keuffel & Esser Co., Thuringia, Hamburg, 30 cs.
H. Reeve Angel & Co., Inc., Mesaba, London, 3 cs.

SURFACE COATED PAPER

T. G. Prager Co., Geo. Washington, Bremen, 5 cs.

METAL COATED PAPER

Hensel, Bruckaman & Lorbacher, Geo. Washington, Bremen, 5 cs.

BARYTA COATED PAPER

Globe Shipping Co., Geo. Washington, Bremen, 96 cs.

WRAPPING PAPER

J. P. Heffernan Paper Co., Andania, Hamburg, 6 bls.
Steffens, Jones & Co., by same, 4 cs.
Judson Freight Forwarding Co., Andania, Havre, 10 cs.
Fidelity International Trust Co., Thuringia, Hamburg, 11 bls.
Republic Bag & Paper Co., Yaye Maru, Hamburg, 140 bls.

PACKING PAPER

J. P. Heffernan Paper Co., Andania, Hamburg, 157 bls.
J. P. Heffernan Paper Co., Ohio, Hamburg, 120 bls.

FILTER PAPER

E. Fougera & Co., Berengaria, Bordeaux, 127 cs.
J. Manheimer, by same, 98 bls.
H. Reeve Angel & Co., Inc., Berengaria, London, 2 cs.
H. Reeve Angel & Co., Inc., Mesaba, London, 1 cs.

PAPER

Circle Pleating Outfit Co., Berengaria, Havre, 2 cs.
R. Wilson Paper Corp., Assyria, Glasgow, 37 cs.
Maurice O'Meara Co., Thuringia, Hamburg, 84 bls.
J. P. Heffernan Paper Co., by same, 45 bls.
G. W. Sheldon & Co., Mesaba, London, 2 cs.

RAGS, BAGGINGS, ETC.

E. J. Keller Co., Inc., Menapier, Antwerp, 63 bls. rags.
Goldman, Sachs & Co., by same, 466 bls. rags.
National Bank of Commerce, by same, 23 bls. rags.
Belgian Bank, by same, 12 bls. rags.
Castle & Overton, Inc., by same, 35 bls. rags.
Brown Bros. & Co., by same, 67 bls. rags.
Anglo-South American Trust Co., by same, 33 bls. rags.
Manufacturers Trust Co., Edgehill, Naples, 79 bls. rags.
National City Bank, by same, 57 bls. rags.
I. Abela & Co., Columbia, Trieste, 80 bls. rags.
E. J. Keller Co., Inc., by same, 232 bls. rags.
National City Bank, by same, 68 bls. rags.
E. J. Keller Co., Inc., Andania, Hamburg, 76 bls. rags.
Bash & Greenfeld Co., Samaria, Liverpool, 8 bls. rags.
E. Butterworth & Co., Inc., Baltic, Liverpool, 106 bls. bagging.
Katzenstein & Keene, Inc., Vardulia, London, 41 bls. rags.
Italian Bank, Braga, Marseilles, 325 bls. rags.
Brown Bros. & Co., by same, 70 bls. rags.
Levy Cohen, by same, 53 bls. rags.
Salomon Bros. & Co., by same, 32 bls. rags.
National City Bank, by same, 113 bls. rags.
Maurice O'Meara Co., Bay State, Dundee, 23 bls. jute waste.
Castle & Overton, Inc., by same, 33 bls. paper stock.
National City Bank, Bay State, Leith, 90 bls. paper stock.
Brown Bros. & Co., by same, 14 bls. rags.
Brown Bros. & Co., by same, 39 bls. bagging.
American Exchange National Bank, by same, 89 bls. bagging.
Katzenstein & Keene, Inc., Assyria, Glasgow, 47 bls. paper stock.
Brown Bros. & Co., by same, 92 bls. rags.
Brown Bros. & Co., by same, 28 bls. bagging.
Atlas Waste Manufacturing Co., Vincent, Havre, 24 bls. bagging.
Atlas Waste Manufacturing Co., by same, 70 bls. rags.
D. M. Hicks, Inc., by same, 56 bls. new cuttings.
D. M. Hicks, by same, 109 bls. bagging.
Leshner Paper Stock Co., by same, 144 bls. paper stock.
Atterbury & McKelvey, by same, 51 bls. paper stock.
The Stone Bros. Co., Inc., by same, 18 bls. paper stock.
Salomon Bros. & Co., by same, 134 bls. bagging.
The Stone Bros. Co., Inc., Vincent, Dunkirk, 68 bls. rags.
Atterbury & McKelvey, by same, 28 bls. rags.
Albion Trading Co., by same, 3 bls. rags.
Castle & Overton, Inc., by same, 71 bls. bagging.
L. H. Abenheimer, Geo. Washington, Bremen, 123 bls. rags.
Bankers Trust Co., by same, 141 bls. rags.
International Acceptance Bank, by same, 58 bls. rags.
International Acceptance Bank, by same, 33 bls. new cuttings.
Equitable Trust Co., by same, 292 bls rags.
E. J. Keller Co., Inc., Sarcoxie, Bordeaux, 238 bls. rags.
W. Barnet & Sons, by same, 51 bls. rags.
Atlantic Exchange Bank & Trust Co., by same, 275 bls. rags.
A. W. Fenton, Inc., by same, 153 bls. rags.
State Bank, by same, 37 bls. rags.
E. J. Keller Co., Inc., Sarcoxie, St. Nazaire, 209 bls. bagging.
E. J. Keller Co., Inc., Yaye Maru, Hamburg, 29 bls. rags.
National City Bank, by same, 183 bls. rags.
Belgian Bank, by same, 39 bls. rags.
Manufacturers Trust Co., by same, 327 bls. rags.
State Bank, by same, 155 bls. rags.
International Acceptance Bank, by same, 244 bls. rags.
National City Bank, Exeter City, Bristol, 68 bls. rags.
State Bank, Archimedes, Manchester, 57 bls. rags.
Equitable Trust Co., by same, 81 bls. bagging.
L. H. Abenheimer, by same, 71 bls. bagging.
E. Butterworth & Co., Inc., by same, 225 bls. bagging.
W. Schall & Co., by same, 47 bls. bagging.
National Bank of Commerce, by same, 56 bls. new cuttings.
R. F. Dowling & Co., by same, 71 bls. new cuttings.
Mechanics & Metals National Bank, by same, 28 bls. new cuttings.
Mechanics & Metals National Bank, by same, 247 bls. rags.
National City Bank, by same, 261 bls. rags.
American Exchange National Bank, by same, 66 bls. rags.
American Exchange National Bank, by same, 103 bls. new cuttings.
Royal Manufacturing Co., by same, 91 bls. cotton waste.
Ayres, W. C. Jones, by same, 76 bls. cotton waste.
State Bank, Mesaba, London, 108 bls. paper stock.
E. Butterworth & Co., Inc., West Eldara, Antwerp, 26 bls. bagging.
Mutnick Bros., by same, 19 bls. rags.
S. Birkenstein & Sons, by same, 861 bls. rags.
The Stone Bros. Co., Inc., by same, 164 bls. rags.
Royal Manufacturing Co., by same, 25 bls. cotton waste.
A. W. Fenton, Inc., by same, 414 bls. rags.
Maurice O'Meara Co., by same, 226 bls. rags.
Brown Bros. & Co., by same, 208 bls. rags.
Brown Bros. & Co., by same, 28 bls. bagging.
Castle & Overton, Inc., by same, 109 bls. bagging.
L. H. Abenheimer, Hellen, Marseilles, 240 bls. rags.
National City Bank, by same, 81 bls. rags.
V. Galaup Corp., by same, 146 bls. rags.
Mechanics & Metals National Bank, Hellen, Algiers, 396 bls. rags.
Belgian Bank, Villa Ada, Genoa, 85 bls. rags.
Equitable Trust Co., Villa Ada, Leghorn, 158 bls. rags.
Coal & Iron National Bank, by same, 143 bls. bagging.

OLD ROPE

Brown Bros. & Co., Exeter City, Swansea, 42 coils.
Brown Bros. & Co., Exeter City, Bristol, 334 coils.
Brown Bros. & Co., Mesaba, London, 140 coils.
Brown Bros. & Co., by same, 30 bls.
Brown Bros. & Co., Assyrian, Glasgow, 75 coils.

(Continued on page 62)

The Home of Quality

FACTORY
132ND TO 133RD ST. & BROOK AVE

PAPER BAGS and SACKS

GLASSINE BAGS—SPECIALTIES

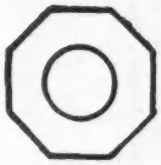
Operating a Modern Printing Plant

SCHORSCH & CO.

Manufacturers *Established 1901*

500 East 133d Street . New York

This Registered Trade Mark Octagon



on a Paper Bag vouches for Its Good Quality

FRANKLIN PAPER CO. HOLYOKE, MASS.

MANUFACTURERS OF

Index Bristols, White Bristol Blanks, Etc.

LINDSAY FOURDRINIER WIRES

are THE wires

For Fast New Machines

or any others

Nuf Sed

THE LINDSAY WIRE WEAVING CO.

Collinwood Sta., Cleveland, Ohio

Penn Paper and Stock Company

PACKERS OF ALL GRADES OF

WASTE PAPER

240 N. FRONT STREET PHILADELPHIA

GENERAL Aluminum Sulphate CHEMICAL

GENERAL CHEMICAL COMPANY 40 RECTOR STREET, NEW YORK

WE BUILD

Head Gates and Gate Hoists

FOR ALL PURPOSES

Our Illustrated Catalogue Mailed Upon Request

DAYTON BEATER & HOIST CO.

Dayton, Ohio

Gatti Paper Stock Corporation

41 East 42nd St., New York

Paper and Woolen Mfrs.' Supplies

COTTON AND WOOLEN WASTE

Warehouse—Hoboken, N. J. Branch Office—Holyoke, Mass.

New York Office
280 Broadway

Dayton Office

Chicago Office
10 So. La Salle St.

Compare it
Tear it
Test it
and you will specify it

HOWARD BOND

WATERMARKED

"The Nation's Business Paper"

Made by

THE HOWARD PAPER CO. URBANA, OHIO

Howard Laid Bond
Howard Ledger
Howard Bond Envelopes

Imports of Paper and Paper Stock

(*Continued from page 60*)

Brown Bros. & Co., London Exchange, London, 58 coils.
Brown Bros. & Co., Baltic, Liverpool, 83 bls.
Brown Bros. & Co., Samaria, Liverpool, 41 bls.
Brown Bros. & Co., by same, 10 coils.
Brown Bros. & Co., Stavangerfjord, Oslo, 40 coils.
E. J. Keller Co., Inc., America, Bremen, 52 coils.
E. J. Keller Co., Inc., Geo. Washington, Bremen, 54 coils.

WOOD PULP

Tidewater Paper Mills Co., Bornholm, Liverpool, N. S., 12,042 bls. ground pulp.
M. Gottesman & Co., Inc., Columbia, Sibenico, 4,000 bls. wood pulp.
E. M Sergeant & Co., Stavangerfjord, Oslo, 300 bls. chemical pulp.
Castle & Overton, Inc., Thuringia, Hamburg, 135 bls., 27 tons, wood pulp.
Castle & Overton, Inc., Yaye Maru, Hamburg, 850 bls. wood pulp.
E. J. Keller Co., Inc., by same, 900 bls., 135 tons, sulphite pulp.
Equitable Trust Co., by same, 468 bls., 70 tons, sulphite pulp.
Ira L. Beebe, Ohio, Hamburg, 2,530 bls. wood pulp.
J. Anderson & Co., by same, 624 bls. wood pulp.
International Acceptance Bank, Eastern Voctor, Rotterdam, 975 bls., 202 tons, wood pulp.
Johaneson, Wales & Sparre, Inc., St. Stephen, Holmsund, 3,500 bls. sulphate pulp.
Johaneson, Wales & Sparre, Inc., Olson, Sundsvall, 4,750 bls. sulphite pulp.

CASEIN

West Virginia Pulp & Paper Co., West Carnefax, Buenos Aires, 417 bags, 25,020 ks.
T. M. Duche & Sons, by same, 2,168 bags, 130,080 ks.

PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 7, 1925

Paper House of Pennsylvania, Hameln, Bremen, 600 rolls printing paper.
Paper House of Pennsylvania, by same, 167 bls. printing paper.
Paper House of Pennsylvania, by same, 11 cs. printing paper.
Keystone Blue Paper Co., Innoko, Rotterdam, 8 cs. paper.
Paper Service Co., by same, 2 cs. paper.
E. H. Bailey & Co., Bay State, Leith, 56 cs. paper.
H. Atkinson, London Exchange, London, 234 bls. strawboard cuttings.
Katzenstein & Keene, Inc., by same, 50 bls. rags.
Castle & Overton, Inc., by same, 283 bls. rags.
Castle & Overton, Inc., Vincent, Havre, 88 bls. rags.
Katzenstein & Keene, Inc., by same, 28 bls. rags.
J. J. Patricof, by same, 43 bls. rags.
Salomon Bros. & Co., by same, 694 bls. rags.
The Stone Bros. Co., Inc., by same, 323 bls. rags.
New York Trust Co., by same, 14 bls. rags.
True & McClelland, by same, 65 bls. rags.
Brown Bros. & Co., Caledonian, Liverpool, 13 bls. rags.
Equitable Trust Co., London Exchange, London, 40 bls. waste paper.
Castle & Overton, Inc., by same, 162 bls. rags.
National Bank of Commerce, by same, 108 bls. paper stock.
Equitable Trust Co., Vardulia, London, 126 bls. waste paper.
Castle & Overton, Inc., by same, 280 bls. rags.
Castle & Overton, Inc., Bay State, Leith, 163 bls. rags.
J. A. Steer & Co., by same, 159 bls. rags.
Castle & Overton, Inc., Sarcoxie, Bordeaux, 378 bls. rags.
S. Shapiro & Sons, by same, 208 bls. rags.
Atlantic Exchange Bank & Trust Co., by same, 179 bls. rags.
Katzenstein & Keene, Inc., by same, 127 bls. rags.
Philadelphia National Bank, Valemore, Liverpool, 48 bls. paper stock.
Castle & Overton, Inc., Hoosac, Glasgow, 131 bls. paper stock.
G. M. Graves & Co., Inc., by same, 67 bls. rags.
J. A. Steer & Co., by same, 100 bls. rags.
Corn Exchange Bank, Yaye Maru, Hamburg, 23 bls. rags.
Chase National Bank, by same, 22 bls. rags.
National Bank of Commerce, by same, 70 bls. rags.
Union National Bank, by same, 208 bls. rags.
E. Butterworth & Co., Inc., by same, 57 bls. rags.
Second National Bank of Boston, by same, 90 bls. rags.
Equitable Trust Co., by same, 112 bls. rags.
Brown Bros. & Co., by same, 152 bls. rags.
Brown Bros. & Co., Hameln, Bremen, 33 bls. rags.
Union National Bank, by same, 90 bls. rags.
National City Bank, by same, 98 bls. rags.
E. J. Keller Co., Inc., Innoko, Rotterdam, 63 bls. bagging.
G. M. Graves & Co., Inc., Anacortes, Glasgow, 72 bls. paper stock.
E. J. Keller Co., Inc., Hameln, Bremen, 201 bls. rags.
The Stone Bros. Co., Inc., City of St. Joseph, Leghorn, 518 bls. rags.
The Stone Bros. Co., Inc., City of St. Joseph, Naples, 28 bls. rags.
The Stone Bros. Co., Inc., West Eldara, Antwerp, 436 bls. rags.
G. M. Graves & Co., Inc., by same, 8 bls. rags.
S. Shapiro & Sons, by same, 61 bls. rags.
Philadelphia National Bank, by same, 90 bls. rags.
E. J. Keller Co., Inc., by same, 76 bls. rags.
Atlantic Exchange National Bank, by same, 102 bls. rags.
Brown Bros. & Co., by same, 79 bls. rags.
Castle & Overton, Inc., by same, 171 bls. rags.
J. A. Steer & Co., by same, 280 bls. rags.
Guaranty Trust Co., Fererica, Trieste, 75 bls. rags.
Unicn National Bank, by same, 213 bls. rags.
Brown Bros. & Co., by same, 84 bls. rags.
C. J. Webb Sons Co., Mercian, Liverpool, 16 bls. rags.
Baring Bros. & Co., Ltd., by same, 71 bls. paper stock.
Baring Bros. & Co., Ltd., Manchester Mariner, Manchester, 168 bls. paper stock.
Coal & Iron National Bank, by same, 98 bls. paper stock.
Equitable Trust Co., by same, 163 bls. paper stock.
British Bank of South America, by same, 133 bls. paper stock.
Castle & Overton, Inc., by same, 260 bls. rags.
Brown Bros. & Co., by same, 17 bls. rags.
Castle & Overton, Inc., Cabo Torres, Barcelona, 131 bls. rags.
Katzenstein & Keene, Inc., Belfast Maru, Hamburg, 75 bls. bagging.
Katzenstein & Keene, Inc., McKeesport, Havre, 91 bls. rags.
Katzenstein & Keene, Inc., Zarembo, France, 194 bls. rags.
Katzenstein & Keene, Inc., London Exchange, London, 77 bls. rags.
E. J. Keller Co., Inc., L. Luckenbach, Kobe, 300 bls. rags.
E. J. Keller Co., Inc., Fenchurch, Marseilles, 109 bls. rags.
E. J. Keller Co., Inc., Belfast Maru, Hamburg, 93 bls. rags.
E. J. Keller Co., Inc., Liguria, Stockholm, 58 bls. rags.
E. J. Keller Co., Inc., Liguria, Hamburg, 221 bls. rags.
J. A. Steer & Co., Valemore, Liverpool, 110 coils old rope.
Old Colony Trust Co., Bay State, Leith, 118 coils old rope.
Old Colony Trust Co., by same, 7 bls. old rope.
National City Bank, Commack, Buenos Aires, 584 bags casein.
Castle & Overton, Inc., Liguria, Hamburg, 960 bls. pulp wood.
Lagerloef Trading Co., Hameln, Bremen, 33 bls. wood pulp boards.

BOSTON IMPORTS

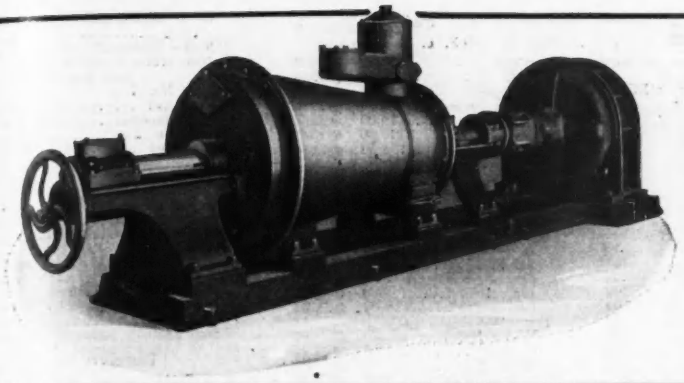
WEEK ENDING FEBRUARY 7, 1925

F. A. Chase & Co., Sac City, Antwerp, 210 rolls building paper.
Paper House of Pennsylvania, Westport, Kotka, 33 cs. printing paper.
B. C. Candy Co., Blommersdyk, Rotterdam, 10 cs. paper.
E. J. Keller Co., Inc., by same, 242 bls. wood pulp.
Castle & Overton, Inc., Sac City, Rotterdam, 765 bls. wood pulp.
Castle & Overton, Inc., ———, Germany, 1,425 bls. wood pulp.
The Booregaard Co., Inc., Frode, Husum, 342 bls. sulphite pulp.
J. Anderson & Co., Frode, Sarpsborg, 2,442 bls. sulphite pulp.
Lagerloef Trading Co., Westport, Kotka, 312 bls. wood pulp boards.
J. Cohen & Josephy, Mercian, Liverpool, 19 bls. rags.
First National Bank of Boston, by same, 15 bls. rags.
First National Bank of Boston, by same, 22 bls. thread waste.
First National Bank of Boston, by same, 73 bls. cotton waste.
Baring Bros. & Co., Ltd., by same, 62 bls. rags.
Baring Bros. & Co., Ltd., by same, 73 bls. bagging.
Brown Bros. & Co., by same, 15 bls. thread waste.
J. B. Moors & Co., by same, 143 bgs. hide cuttings.
New England Waste Co., by same, 29 bgs. rags.
Hollingsworth & Vose Co., Mercian, Manchester, 60 bls. bagging.
Katzenstein & Keene, Inc., by same, 56 bls. new cuttings.
Baring Bros. & Co., Ltd., by same, 55 bls. new cuttings.
Baring Bros. & Co., Ltd., by same, 66 bls. waste paper.
Baring Bros. & Co., Ltd., by same, 16 bls. cotton waste.
Baring Bros. & Co., Ltd., by same, 145 bgs. hide cuttings.
Crocker, Burbank Co., Capulin, London, 92 bls. waste paper.
First National Bank of Boston, by same, 31 bls. rags.
G. M. Graves & Co., Inc., Blommersdyk, Rotterdam, 639 bls. rags.
E. Butterworth & Co., Inc., by same, 89 bls. rags.
W. Schall & Co., by same, 41 bls. rags.
C. H. Dexter Sons, Vallavia, London, 61 bls. rags.
Crocker, Burbank Co., by same, 29 bls. waste paper.
G. M. Graves & Co., Inc., Scotland Maru, Genoa, 91 bls. rags.
J. Lodge & Co., West Inskip, Antwerp, 21 bls. rags.
J. Lodge & Co., by same, 54 bls. thread waste.
Lazarus & Co., by same, 24 bls. cotton waste.
Castle & Overton, Inc., by same, 26 bls. rags.
Green, Hamilton & Co., by same, 54 bls. cotton waste.
Baring Bros. & Co., Ltd., Mercian, Liverpool, 114 coils old rope.
E. J. Keller Co., Inc., Blommersdyk, Rotterdam, 81 bls. old rope.

BALTIMORE IMPORTS

WEEK ENDING FEBRUARY 7, 1925

American Woolstock Corp., Yaye Maru, Hamburg, 30 bls. rags.
Castle & Overton, Inc., Liguria, Hamburg, 275 bls. wood pulp.
Castle & Overton, Inc., ———, Germany, 350 bls. wood pulp.



The
DILLON JORDAN

Our latest Improved Machine, three sizes; belt or direct connected motor driven. All Bearings self-oiling, adjustable and water-cooled. Fitted with Standard Steel Knives, Special Heat Treated Steel, Bronze or Manganese Steel Plug and Shell Lining.

For full particulars apply to

DILLON MACHINE CO., Inc.
Builders of Paper Mill Machinery
Lawrence, Mass.

C. K. WILLIAMS & CO., EASTON PA.

Proprietors of the Penna. Dry Paint and Color Works and the Heller Dry Color, Chemical and Copperas Works of Allentown, Pa.

Manufacturers, Miners and Importers of Coloring Materials, such as Venetian Reds, Red, Brown, Black, Yellow, Oxides, Chrome and other Ochres, also Paper Fillers—as Agalite, Mineral Pulp, Talc, China and other Clays

COLORS FOR PAPER MANUFACTURERS' USE

PULVERIZED COAL EQUIPMENT

AERO PULVERIZER CO., 165 BROADWAY, N.Y.

Norwood

Mechanical Filtration Plants
Gravity and Pressure Types

Write for Information

NORWOOD ENGINEERING CO.
Florence, Mass., U. S. A.

FOURDRINIER
CYLINDER
WASHER
WIRES

50 years' experience as wire makers insures highest quality of product

"Appleton Wires Are Good Wires"

Appleton Wire Works Appleton, Wis.

A Remarkable Range of Grades, Textures and Weights

Orr Endless Felts can now be obtained up to 86 feet in length.

With our enlarged new equipment we can now furnish Paper Manufacturers with endless felts up to 86 feet in length.

Paper Manufacturers who carefully check manufacturing costs, and also strive to produce more and better paper at a lower cost per ton, prefer the unvarying quality and long service of ORR felts. A trial of them will bring about a preference that will be lasting.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Power and Paper, Gen. 6s 1940	99	102*
Advance Bag and Paper, 7s 1943	97	100*
Aroostook Pulp and Paper, 6s 1925	99	...
Bastrop Pulp and Paper, 7½s 1932	102	...
Brompton Pulp and Paper, 6s 1927	93	95
Beaver Board, 8s 1933	87	89
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Board, N. Y. Curb, 8s 1933	87	89
Beaver Products Corp., 7½s 1942	102	104
Belgo Canadian Paper, 6s 1943	97	99
Brown Paper Co., 8s 1931	102	105*
Berlin Mills, 5s 1931	99	...
Bryant Paper Co., 6s 1942	97	100
Brown Company Serial, 6s 1925-43	97	100
Central Paper, 6½s 1925-42	90	95
Cape Breton Pulp and Paper, 6s 1932	100	102
Carthage Sulphite Pulp and Paper, 8s 1941	49	50
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	102	...
Cherry River Paper, 5s 1929	97	100*
Chicoutimi Pulp Co., 6s 1942	63	...
Donnaconna Paper Co., Ltd., 6s 1940	98	100
Eddy Paper, 7s 1931	96	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	84	88
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co, 7s 1942	90	...
Eddy Paper Co., 7½s 1931	95	98
Gilbert Paper Co., 7s 1927	97	...
Gilbert Paper Co., 6½s 1923-29	100	102*
Hammermill Paper Co., 6s 1930-39	98	101
Hercule Corp'n, 8s 1936	98	101
Hummell, Ross Film Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	93	97
Kenmore Pulp and Paper Co., 6s 1937	91	...
Lake Superior Pulp and Paper, 6s 1941	102	...
Mattagami Pulp and Paper, Oct. 7, 1949	30	40
Marinette & Menominee, 7½s 1936	103	105
Mead Pulp and Paper, 7s 1925-29	97	...
Mengel Company, 7s 1934	100	103
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	101	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	99	101
Paterson Parchment Paper, 5½s 1927-28	...	100
Paterson Parchment, 6s 1938	96	99
Parker, Young Co., 6½s 1944	92	96
Price Bros. & Co., Ltd., 6s 1943	98	100
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	104	107
Riordan Paper, 6s 1924	91	94
Riordan Pulp and Paper, Ltd., 6s, 1929	24	28
River Raisin Paper, 8s 1936	102	105
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	90	93
Smith (Howard) Paper Mills, 6s 1934	94	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	86	90
Spanish River Pulp and Paper, 6s 1931	105	...
Spanish River Pulp and Paper, Gen 8s 1941	107	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	86	91
Whittaker Paper, 1st 7s 1942	94	97
Watab Paper Co., 6½s 1942	99	102
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	84	88*

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	62	63
Abitibi Power and Paper, Pfd	98½	103
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	70	75*
Beaver Board, Com	5	8
Beaver Board, Pfd	38	41
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Brompton Pulp and Paper, Cap	29	30
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	101
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Pfd	95	100
Great Northern Paper, Cap	220	250
Howard Smith Paper Co., Com	22	23
Howard Smith Paper Co., Pfd	70	75
Jessup & Moore Paper, Pfd	74	78
International Paper Co., Com	56	57
International Paper Co., Pfd	74	76
Mengel Company, Com	38	40
Mengel Company, Pfd	72*	76
Oxford Paper Co., Pfd	99	...
Provincial Paper Co., Com	87	91
Provincial Paper Co., Pfd	95	98
Price Brothers, Cap	36	38
St. Croix Paper	190	...
St. Maurice Paper Co., Cap	83	88
St. Regis Paper Co., Cap	24	27
Smith (Howard) Paper Co., Ltd., Com	...	25
Smith (Howard) Paper Co., Ltd., Pfd	70	...
Spanish River Pulp and Paper, Com	105	110
Spanish River Pulp and Paper, Pfd	120	125
Ticonderoga Pulp and Paper, Cap	145	...
United Paper Board, Cap	52	55*
West Virginia Pulp and Paper, Cap	46	52
West Virginia Pulp & Paper, Pfd	85	...
Whittaker Paper, Com	14	20
Whittaker Paper, Pfd	44	46

*Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.50	@15.00
Lithograph	9.00	@14.00
Tissues—		
White No. 1	.70	@ .90
Colored	1.00	@ 2.25
White No. 2	.70	@ .80
Anti-Tarnish	1.40	@ 2.30
Kraft	.90	@ 1.00
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	5.00	@ 5.50
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.00
Fibre Papers—		
No. 1 Fibre	5.50	@ 6.00
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.50	@ 2.75
S. Screening	3.25	@ 3.75
Card Middler	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	50.00	@55.00
Chip	42.50	@45.00
Binders' Boards	75.00	@80.00
Sgl. Mla. Lt. Chip	55.00	@60.00
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	32.00	@38.00

(F. o. b. Mill)

No. 1 Domestic	30.00	@35.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.85	@ 4.50
Easy Bleaching	2.90	@ 3.20
No. 1 strong unbleached	2.75	@ 3.25
No. 2 strong unbleached	2.60	@ 3.00
No. 1 Kraft	2.75	@ 3.00
Sulphate—		
Bleached	3.50	@ 3.65

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.75	@ 4.50
Easy Bleaching Sulphite	2.75	@ 3.25
News Sulphite	2.45	@ 2.75
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.70	@ 3.50
Soda Bleached	3.90	@ 4.10

Domestic Rags

New Rags

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.50	@15.50
New White, No. 2	8.50	@10.50
Silesias No. 1	9.50	@10.50
New Unbleached	13.50	@14.50
Washables	6.50	@ 9.25
Fancy	10.00	@10.50
Blue Overall	10.50	@11.50
New Blue Prints	7.50	@ 8.50
New Soft Blacks	5.75	@ 6.20
Mixed Khaki Cuttings	5.50	@ 6.00
Pink Corset Cuttings	10.50	@11.00
Pink Muslin	10.25	@10.75
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	6.50	@ 7.50
Men's Corduroy	6.00	@ 6.75
New Mixed Blacks	4.00	@ 5.00

Old Rags

White, No. 1—		
Repacked	8.00	@ 9.00
Miscellaneous	6.50	@ 7.00
White, No. 2—		
Repacked	4.75	@ 5.25
Miscellaneous	4.00	@ 4.50
St. Soiled, White	3.25	@ 3.75
Thirds and Blues—		
Repacked	4.00	@ 4.25
Miscellaneous	3.25	@ 3.50
Black Stockings	4.00	@ 4.50
Roofing Rags—		
Cloth Strippings	3.15	@ 3.25
No. 1	3.15	@ 3.25
No. 2	2.85	@ 3.05
No. 3	2.00	@ 2.25
No. 4	2.75	@ 2.85
No. 5A	1.80	@1.50

Foreign Rags

New Light Silesias	9.50	@10.50
Light Flannelettes	11.00	@12.00
Unbl'chd Cottons	13.50	@14.50
New White Cuttings	14.00	@15.00
New Light Oxfords	10.00	@11.00
New Light Prints	9.00	@10.00
New Mixed Cuttings	4.25	@ 4.75
New Dark Cuttings	3.75	@ 4.25
No. 1 White Linens	10.50	@11.50
No. 2 White Linens	7.50	@ 8.50
No. 3 White Linens	6.00	@ 6.50
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.75	@ 5.50
Ord. Light Prints	4.25	@ 4.75
Med. Light Prints	3.75	@ 4.25
Dutch Blue Cottons	4.50	@ 5.00
Ger. Blue Cottons	4.25	@ 4.50
Ger. Blue Linens	4.50	@ 5.00
Checks and Blues	3.75	@ 4.00
Linsay Garments	3.10	@ 3.20
Dark Cottons	3.00	@ 3.10
Shoppery	2.90	@ 3.00
French Blues	4.25	@ 4.75

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.00	@ 3.10
Domestic	3.15	@ 3.25
Wool, Tares, light	2.80	@ 2.90
Wool, Tares, heavy	2.85	@ 2.95
Bright, Bagging	2.70	@ 2.80
Mixed Bagging	2.30	@ 2.40
Sound Bagging	2.50	@ 2.60
Roofing Bagging	2.20	@ 2.30
Manila Rope—		
Foreign	6.50	@ 7.00
Domestic	6.50	@ 7.00
New Bu. Cut	3.50	@ 4.00
Hessian Jute Threads—		
Foreign	4.00	@ 4.25
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.60	@ 3.90
Hard, White, No. 2	3.25	@ 3.50
Soft, White, No. 1	2.90	@ 3.15
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag	1.45	@ 1.55
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.60	@ 1.70
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.45	@ 2.60
New Cut. No. 1	1.75	@ 2.00
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	1.00	@ 1.10
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.05	@ 2.15
News—		
No. 1 White News	1.95	@ 2.10
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.95	@ 1.05
No. 1 Mixed Paper	.65	@ .75
Common Paper	.45	@ .55

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.56	@ .61

Finished Jute—			
Dark, 18 basis	.30	@	.31
Light, 18 basis	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.20	@	.23
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.15	@	.17
Fine Tube Yarn—			
5-ply and larger	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India—			
Basis	.14	@	.15
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Amer. Hemp, 6	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

CHICAGO

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1 Rag Bond	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond	7	@	10¼
Sulphite Ledger	9½	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5¼	@	7½
No. 1 S. & S. C. Book	6½	@	7¾
Coated Book	8	@	10
Coated Label	8	@	10
News—Rolls, mill	3½	@	4½
News—Sheets, mill	3¾	@	4¾
No. 1 Manila	4½	@	5½
No. 1 Fibre	4½	@	5¾
No. 2 Manila	3¾	@	4¾
Butchers' Manila	4	@	4½
No. 1 Kraft	5¾	@	6¼
No. 2 Kraft	5.25	@	5.50
Wood Tag Boards	4¼	@	6
Sulphite Screenings	3.00	@	3.25
Manila Tissue, 24x36 sheet	7½	@	8
White Tissue, 20x30 sheet	7	@	7¼
Boards, per ton—			
Plain Chip	50.00	@	52.50
Solid News	52.50	@	55.00
Manila Line Chip	62.50	@	65.00
Container Lined—			
85 Test	72.50	@	75.00
100 Test	77.50	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.50	@	3.60
White Envel. Cuttings	3.50	@	3.60
No. 1 Soft Shav.	3.20	@	3.25
No. 1 Mixed	1.85	@	1.90
No. 2 Mixed	1.70	@	1.75
Ledger and Writings	1.60	@	1.65
Solid Books	1.55	@	1.60
No. 1 Light Books	1.15	@	1.20
Blanks	2.10	@	2.15
Kraft	2.35	@	2.40
New Kraft Cuts	2.60	@	2.70
Manila Envelope Cuttings	2.65	@	—
Ex. No. 1 Manila	2.35	@	2.40
Print Manila	1.20	@	1.25
Folded News (overissue)	.90	@	.95
Old Newspapers—			
No. 1	.75	@	.80
No. 2	.70	@	.75
Mixed Papers—			
No. 1	.75	@	.77½
No. 2	.70	@	—
Straw Clippings	.85	@	.90
Binders' Clippings	.80	@	.85
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	—	@	50.00
No. 2	—	@	48.00
No. 3	—	@	46.00
No. 4	—	@	40.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.08½	@	.14
Rag Content	.17	@	.45
All Rag	.36½	@	.51
Writings	.08½	@	.20
Superfines	.20	@	.48
News	.04	@	.06½
Book, M. F.	.06½	@	.10¾
Book, Super	.07½	@	.11
Book, Coated	.09	@	.20
Coated Litho	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.12	@	.13
Manila, Sul. No. 1	.05	@	.06
Manila, Sul. No. 2	.03¾	@	.04¼
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.05¾	@	.05½
Common Bogus	.03½	@	.04
Straw Board	—	@	50.00
News Board	—	@	52.50
Chip Board	—	@	50.00
Single Manila Pulp lined board	60.00	@	65.00
Single White, patent coated board	75.00	@	85.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	4.25
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White	.04½	@	—
No. 2 Soft White	.03¼	@	—
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	2.25
Writing Paper	—	@	1.70
No. 1 Books, Heavy	1.75	@	1.85
No. 1 Books, Light	—	@	1.50
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	1.20
Old Newspapers	.70	@	.75
No. 1 Mixed Paper	.60	@	.65
Box Board, Chip	.60	@	.65

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.00
Domestic	—	@	3.00
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	1.62½
Scrap burlaps	—	@	3.00
Wool Tares, heavy	—	@	3.00
Mixed Strings	—	@	2.25
New Burlap Cuttings	—	@	3.75

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15¾
Silesias, No. 1	.11	@	—
New Unbleached	.14¼	@	.14½
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls	.12½	@	—
New Black, soft	.07	@	—
Khaki Cuttings	.07	@	—
Corduroy	.04	@	.04½
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1	10.00	@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous	3.50	@	—
Roofing Stock—			
No. 1	3.00	@	—
No. 2	3.00	@	—
No. 3	2.50	@	—
No. 4	2.00	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F	.06½	@	.07½
Book, S. S. & C	.06½	@	.08
Book, Coated	.11½	@	.17
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	
Manila Sul., No. 1	.04½	@	.06
Manila No. 2	.04	@	.04½
No. 2 Kraft	.05¼	@	.05¾
No. 1 Kraft	.06¼	@	
Common Bogus	.02¾	@	
Straw Board	55.00	@	60.00
News Board	50.00	@	
Chip Board	50.00	@	
Wood Pulp Board (Carload Lots)	4.50	@	5.00
Binder Boards—			
Per ton	75.00	@	80.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	1.75	@	1.85
Domestic	1.65	@	1.70
Manila Rope	5.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.25	@	—
Scrap Burlaps	1.65	@	1.70
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.00	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.75	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.65	@	3.70
No. 2 Hard White	3.25	@	3.40
No. 1 Soft White	2.90	@	3.00
No. 2 Soft White	2.05	@	2.25
No. 1 Mixed	1.75	@	—
No. 2 Mixed	1.25	@	1.30
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.50	@	1.75
No. 1 Books, heavy	1.50	@	1.60
No. 2 Books, light	1.15	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.75
Container Manila	1.15	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.05	@	1.10
Old Newspaper	.75	@	.80
No. 1 Mixed Paper	.75	@	.80
Common Paper	.60	@	.70
Straw Board, Chip	.65	@	.70
Binders Bd., Chip	.75	@	.80

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13	@	.14
New White, No. 2	.07½	@	
Silesias, No. 1	.08	@	.08¼
New Unbleached	.12	@	.12½
Washable	.05½	@	.05¾
Fancy	.07	@	.07¼
Cottons—according to grades—			
Blue Overall	.08¼	@	.09
New Blue	.04	@	
New Black Soft	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.09	@	.09½
New Black Mixed	.05	@	.05½

Old

White, No. 1—			
Repacked	7.00	@	7.25
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05½	@	.05¾
Miscellaneous	.05	@	.05¼
Thirds and Blues—			
Repacked	3.40	@	3.60
Miscellaneous	3.15	@	3.25
Black Stockings	4.00	@	4.25
Roofing Stock—			
No. 1	2.25	@	2.35
No. 2	2.15	@	2.25
No. 3	1.20	@	1.30
No. 4	2.10	@	2.20
No. 5A	1.40	@	—
B	1.25		nominal
C	1.15		nominal

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11½	@	.12½
Light tinted	.12½	@	.13½
Dark tinted	.14	@	.15
Ledgers (sulphite)	—	@	.13
Ledgers No. 1	34	@	
Ledgers No. 2	26	@	
Writing	.09½	@	
Writing S. C.	.10	@	
News, f. o. b. Mills—			
Rolls (carloads)	3.65	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	8.25	@	—
No. 2 M. F. (carloads)	7.95	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.75	@	—
No. 2 S. C. (carloads)	8.25	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	30.00	@	33.00
Sulphite easy bleaching	62.50	@	65.00
Sulphite news grade	50.00	@	55.00
Sulphite, bleached	78.00	@	—
Sulphate	65.00	@	67.50

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	3.60	@	—
Soft White Book shavings	3.25	@	—
White Blk, News	1.90	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.50	@	—
Light and Crumpled Book Stock	1.35	@	—
Ledgers and Writings	1.75	@	—
Solid Ledgers	1.75	@	—
Manilas—			
New Manila Cut.	—	@	1.70
Printed Manilas	1.20	@	—
Kraft	2.15	@	—
News and Scrap—			
Strictly Overissue	1.00	@	—
Folded News	1.00	@	—
No. 1 Mixed Papers	.90	@	—

Domestic Rags—
Price to mills, f. o. b. Toronto
Per lb.

No. 1 White shirt cuttings	.15	@	.15¼
No. 2 White shirt cuttings	.07½	@	.08
Fancy shirt cuttings	.09¾	@	.10
No. 1 Old Whites	—	@	—
Third and blues	.05½	@	.05¾

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, February 11, 1925.

With the executives of the paper industry giving their attendance and personal attention to the affairs of convention week it would have been unreasonable to expect any great activity in the paper market last week, and yet business was exceptionally good in most lines and paper men say the convention did not cause the ripple on the business sea that it has done some years. For the first time in a long while the coast is absolutely clear and the industry can settle down to giving its undivided attention to business. Inventory is over and the convention was the last interruption that the market will be called upon to experience for some time. The future must produce what is expected of it for there can be no alibi for its failure to do so.

Paper mill supply houses are making most encouraging reports. The volume of their business is large at the present time. There is no indication of a boom but there is every assurance of good substantial business. Individual orders are not much larger than six months ago but the total increase is general and that is the report from all over the country. Some houses report a 25 per cent increase over the corresponding period of 1924. This is not confined to any one branch of the industry but to tissue, board, news and various other items. The general business improvement is being participated in by them all although most of the buying is for immediate needs.

News swings along at the same consistent gait which is customary. Many of the big papers are buying further ahead than was ever known before and the smaller papers are more generally getting into the habit of buying ahead, whereas they have usually confined their buying close to their immediate needs.

Bonds are on the crest wave of popularity and some of the mills report that they are over sold.

The story of coarse papers is not so gratifying. They are struggling along as they have been doing, and it is hoped that the demand for them will show stimulation soon. The same is also true of high grade specialties, the demand for which is none too brisk.

Mechanical Pulp

Prices are firm and conditions healthy in regard to mechanical pulp. The demand has showed a slight improvement and a material change for the better is looked for. The tendency of prices at the present writing indicates an early advance.

Chemical Pulp

Good orders for chemical pulp are steadily coming into the market. Prices are holding firm, few concessions are being made and the market is looking upward all the time.

Old Rope and Bagging

Old rope and bagging were a little off the past week but are now beginning to come back. The predicted advance in prices worked contrary to expectations for the week saw the prices very generally shaved a trifle. It is believed, however, that they will not stay there long before they move upward again.

Rags

The rag market probably suffered more than anything else as a result of the convention. With the mill executives in attendance at the convention only routine orders come through and now the rag men are waiting to see what sort of buying mood the mill men will develop when they get back. Orders were coming through better during the past week and before another week ends a very great improvement is looked for. Stock is not yet coming in in very heavy quantities. The inclement weather put back collections everywhere and in some sections where they have had much snow collections have been practically at a standstill. The thaw which set in this week is helping out and reports indicate that collections are being resumed and that stock will begin coming in in a normal manner soon unless more snow comes. One or two items in domestic rags and a number in foreign rags were marked to a slightly lower figure during the week.

Waste Paper

Waste paper has also been through a quiet week which does not worry the waste paper men as much as it would if they had any great accumulation of stock. Collections here have also been slow owing to the bad weather and the heavy snow fall. The collectors have been taking advantage of the thaw of the past week, however, and this week will see more waste paper coming into the market than has been the case for some weeks. Prices are holding firm and the tendency is toward higher levels.

Twine

Twine had a fair week but buying is still very conservative and does not widen out as it should do at this season of the year. Prices remain unchanged and will probably stay so until the market shows more activity than it is showing at the present time.

PAPER QUIET IN PHILADELPHIA

(*Continued from page* 31)

another huge paper machine was placed. The purchase was made from the Delaware County Electric Company and the consideration involved is reported to be $72,500. When final details of the transactions are arranged, the paper company will have approximately 300 feet on Market street and about 450 feet on Front street. Dockways at the rear make the property accessible to river barges. Erection of a new filtration plant and a new power house is contemplated. While total sales of the company in 1914 were $1,017,098, those of last year had increased to about $3,000,000.

Endura Manufacturing Co. Fire

A five-hour fire caused a damage of $25,000 to the one-story building of the Endura Manufacturing Company, 63rd street and Eastwick avenue, manufacturers of lining papers and leather substitutes used in the construction of automobiles and other devices and fiberoid gaskets. The damage was confined to the paper stockroom and its contents of waste paper used in the making of the gaskets. The building was entirely destroyed. This is the second fire which has occurred in the plant within the past six months, the main building of the group of structures devoted to the production of these specialties having been entirely destroyed in an earlier conflagration that caused a loss of $75,000.

News Notes of the Trade

Charles E. Brian, vice-president of the Paper Makers' Importing Company of Easton, Pa., was a visitor to Philadelphia during the week for the purpose of inspecting its port facilities and their adaptability to his large interest in the paper field and the pottery manufacturing business. He was accompanied by J. C. Donnelly, traffic manager of the United States Potters' Association and, as the guests of the Philadelphia Tide Water Terminal interests, both were shown the various piers available for their uses as importers of paper makers' supplies and china clay.

Vice-President and Sales Manager Andrew Simon, of the Charles Beck Paper Company, 609 Chestnut street, accompanied by A. E. Bauer, Central Pennsylvania sales representative for the company, journeyed to Harrisburg during the week to attend the annual banquet of the Harrisburg Typothetæ held at the Penn-Harris Hotel in that city.

Head Office Removed to Cornwall

The Kinleith Paper Mills' shareholders held a meeting recently and decided to remove the head office from St. Catharines to Cornwall, Ont. The plant, which is now idle, was acquired by the Howard Smith Paper Mills, Montreal, some time ago. The Kinleith Company, it was decided, may establish branch offices at such places as the directors see fit.

PRICE & PIERCE, Ltd.
17 East 42d St., New York
Selling Agents for Bathurst Company ltd. BATHURST, N. B.
Kraft Pulp and Easy Bleaching Sulphite

MEAD, PATTON & CO., INC.
366 MADISON AVE., NEW YORK
PULP · PAPER

TRAIN SMITH COMPANY
Paper Mill Supplies
10 Milk St. (Old South Bldg.), Boston, Mass.
Packing Houses: Chelsea, Mass. Branches: London-Liverpool

JOHN WALDRON CORPORATION
NEW BRUNSWICK, N. J.
Direct Factory Branches
549 W. Wash. Blvd. CHICAGO · 30 E. 42d St. NEW YORK CITY · 79 Milk St. BOSTON

LIQUID CHLORINE
Tank Cars 1-ton Containers 150-lb. Cylinders
Commercial Sulphate of Alumina
Standard Bleaching Powder
Natrona Porous Alum
Pennsylvania Salt Mfg. Company, Philadelphia, Pa.

FRANCIS HUGHES CO.
Dependable Packing
PAPER STOCK
2100-12 So. Loomis St., CHICAGO, ILL.

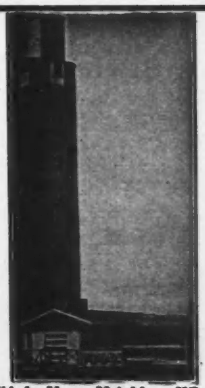
LOCKPORT, N. Y. NIAGARA FALLS, ONT.
F. W. ROBERTS MANUFACTURING COMPANY
All Products Guaranteed to Suit You
STEEL SHELL BURRS YELLOW JACKET SHOWER
Read the "ROBERTS IDEA"

E. F. RUSS COMPANY
Hide Cuttings.
Glue
Largest specialists in America on surface sizing of Paper.
287 ATLANTIC AVE. BOSTON, U. S. A.

Don't Guess at Important Matters
BOWSHER'S SPEED or MOTION INDICATOR is indispensable
in obtaining a UNIFORM speed of machinery, and is one of the most PROFITABLE little devices ever put in a mill. Will pay for itself in 30 days. Dial 12 in. in diam. Weight. 10 lbs.
The N. P. Bowsher Co., South Bend, Ind.

PAPER TESTS
In Accordance with T. A. P. P. I.
Standard Methods
Oils — Paper — Water — Microphotography
Electrical, Mechanical, Physical, Chemical and Photometric Tests
ELECTRICAL TESTING LABORATORIES
80th St. & East End Ave., New York

ATTERBURY BROS.
(INCORPORATED)
WOOD PULP, RAGS AND PAPER STOCK, FRENCH CASEINE
146 NASSAU STREET (POTTER BLDG) NEW YORK


75 JENSSEN
Two-Tower Acid Systems now in operation or building.
Jenssen Spray Type Cooler
Bullard Gas Washer
Decker Cooking Process
Kamyr Feltless Machines
Kamyr Pulp Presses
"Ask Your Neighbor What He Thinks of Them"
G. D. Jenssen Company
200 5th Ave. New York, N. Y.

PAPER STOCK
in 40 grades
Write, phone, wire.
RAW MATERIALS FOR PAPER MAKERS
Out of our forty grades of paper stock you are assured of just the kind to meet your particular needs. Furthermore, dealing with an organization of specialists with the backing of 40 years of experience, you are assured of a steady, reliable, source of supply backed by business-like methods and service. Big tonnage, fulfillment of delivery promises, a clean, uniform product, well packed throughout—these are reasons for making us your service station in time of need.
Mendelson Bros. Paper Stock Co.,
General Offices: 910 So. Michigan Ave., Chicago, Ill.
Long Distance Phones: Harrison 2840, 2841, 2857

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, February 11, 1925.

Fair activity was evidenced in the chemical market during the past week although the general trend of the market is not such as to put the chemical men in a boastful mood. Orders are fair and inquries are insistent but there is too much business still being held in abeyance to permit of anything in the nature of a real spurt. While business is very good generally speaking there are still many who are doing only conservative buying. Whether it is because they have got into the rut of hand-to-mouth buying because they are still skeptical regarding the future is a question. The chemical men, however, are not despondent and still insist that better business for them is on the way and that 1925 promises to be a good year and, perhaps, an exceptionally good one. Prices hold firm and it is reasonable to believe that there will be little shakeup in the present schedule for some time to come.

BLANC FIXE.—While there has been little if any change in blanc fixe the price at this writing is a trifle higher than has been quoted for some weeks. Because of the wide range in price it is difficult to strike a ruling figure but from all reports the average figure is somewhat higher than it has been. This will not prove stimulating news unless the indication of a higher trend alarms delinquent buyers into placing their orders for there has been dissatisfaction over the price charged for some time, business has been held back for that reason and a move upward is not likely to act as a key to unlock the door and release pent up business. The ruling figure on pulp appears to be from $60 to $70 a ton while that on powder is from $75 to $90.

BLEACHING POWDER.—Bleach has undergone no change. The demand slowed up a little a week ago and still remains quiet. It is the price element which is probably holding bleach back for such stock as is being moved is being moved in very limited quantities. It is quoted at from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—Caustic soda is doing very well just now. The past week saw business coming in the same consistent manner that has applied to this commodity recently. The consumers are calling for stock for a considerable period ahead. The price still holds at from 3.10 to 3.15 cents a pound.

CASEIN.—Casein which has been doing considerably better of late is still swinging along encouragingly although the past week has seen no further exhiliration. Still casein is losing no ground and as long as it moves as it is doing at the present time there will be no complaint. The fact that Argentine casein is coming into the market in lesser quantities has had a tendency to convince buyers that now is a good time to buy and has stimulated the demand. The price of from 12 to 13 cents a pound still holds.

CHINA CLAY.—The excellent demand for China clay still holds up and orders of good size are steadily reaching the market. Conditions are about as they were a week ago and the chemical men will be satisfied to keep them so. The imported grades are bringing from $16 to $20 a ton and the domestic grades from $12 to $15.

CHLORINE.—There is no change in chlorine which continues to follow along with bleaching powder. The demand recently slowed up and is still quiet. A reduction in price would probably bring to life a lot of business which is now lying dormant but it is not likely that such a reduction will be made. The price remains at from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—Rosin has been selling well since the advance of price which was reported a week ago. The market continues strong, the demand being consistent and there being no over abundance of stock. It is quoted at from $6.15 to $6.35 at the naval stores centers.

SALT CAKE.—Salt cake which has been improving had another good week. Stock is being taken out with greater rapidity and interest in this commodity is very general at this time. The price is from $17 to $20 a ton.

SODA ASH.—Soda ash continues to go forward in good shape. There is more future buying and the outlook is very reassuring. The price remains at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphite of alumina during the past week witnessed a reduction in price on the iron free. The demand is excellent and large withdrawals are being made regularly. The price is from 1.40 to 1.45 cents a pound for the commercial grade at the Eastern works and from 2.10 to 2.25 cents a pound for the iron free.

SULPHUR.—Sulphur continues to meet the same satisfactory demand and the price is still from $18 to $19 a ton.

TALC.—The present demand for talc is the best it has been for some time. The tone of the market is excellent. The price is from $16 to $17 a ton.

DISCUSSION OF RAW MATERIALS

(*Continued from page* 58)

already filled. I think if you were to specify a certain amount of sulphite to go in the beater then the beater men would have to be more careful, and might cut down a little on the rags for when you get all that sulphite in, the variation you get on your "car equivalent" in rags wouldn't be so noticeable and since rag is more expensive than sulphite, anything you can save on rags would be more to your credit than saving on sulphite.

On your process supplies, it is just a question of getting the number of pounds to the gallon of your rosin and alum and your glue, and knowing that your buckets are a certain standard size. I think it is a good thing to go through and check that up occasionally, and see that they are not changing the size; the pails are two gallon pails and quart pails, and when they get orders to buy new ones, they sometimes get a different size, one that contains more. We found that recently, found they had changed the size, and the cost man hadn't been notified. You have to check the size to be sure the pail is of the size you are using on your cost records, and see that the amount hasn't been changed, especially on rosin. I find it is very easy for them to change from one per cent on a certain grade to one and one-half, and you have a discrepancy right there.

As far as I can see, you ought to be on the job 24 hours a day in 12 different departments, checking up everything in order to keep straight. The only thing I'd like to leave with you is the fact that you have these standards established, and they don't mean anything unless you check them at least every three months, and it is only by getting the averages over a year or two years that you are going to get any good records. I think if you insist upon having these figures checked, and show the manufacturer and the superintendent what can be saved by checking up these leaks, that you will get very much better cooperation all around. (Applause.)

PRESIDENT REILLY: We are surely very grateful to Miss Kiely for coming here and giving us this wonderful talk on the treatment of raw material. Miss Kiely has the distinction of being the first woman to ever address the Cost Association of the Paper Industry, and I think from this address today—it might be a good suggestion to the Program Committee in the future to have more ladies on our program so we can get their ideas relative to how good the cost man is and what he has to do. (Applause.)

Tulip Paper Cup Stock Is Offered

A new offering of 30,000 shares of Tulip Corporation common at $15 a share is being made by H. D. Williams & Co. The corporation was formerly called the Paper Utilities Company, Inc. It manufactures paper drinking cups, also soda, cake and scuffle cups, butter chips and finger bowl liners. Last year, according to the company, more than 500,000,000 drinking cups were sold. Quarterly dividends on the common are to be inaugurated in April under the company's plan.